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Welcome to UCSF Education Showcase 2017

Dear Friends,

On behalf of the Center for Faculty Educators, we are proud to present the sixteenth annual Education Showcase, an event that highlights the scholarly work in education of UCSF faculty, learners and staff. The showcase includes a pre-event day of workshops for Teach for UCSF Certificate scholars, on March 19, and spans two campus locations, Mission Bay on March 19-20 and Parnassus on March 21.

Scholarly presentations address questions and innovations in health professions education. Following a blinded peer review of all submissions, the Academy of Medical Educators Scholarship Committee selected six plenary presentations based upon their quality and collective relevance to the audience of educators. Forty-five presentations will be presented as mini-oral presentations, which offer a unique opportunity for engagement and dialogue. Additionally, between March 20 and 21, there will be six faculty development workshops chosen to address current topics in our teaching.

We are very pleased that Lorelei Lingard, PhD, Professor in the Department of Medicine and Director of the Centre for Education Research & Innovation, both at the Schulich School of Medicine & Dentistry at Western University, Ontario, Canada, is this year’s visiting professor. Dr. Lingard is an internationally recognized researcher in the study of communication and collaboration on healthcare teams. Her keynote address, “Are we training for collective incompetence? Three common educational assumptions & their unintended impact on healthcare teamwork” will provoke us to think about how to attend to this important issue.

This year marks the eleventh annual presentation of the Academy’s Cooke Awards for the Scholarship of Teaching and Learning. Please join us in congratulating the awardees at the conclusion of Monday’s plenary session.

On Tuesday, March 21, Dr. Lingard will lead a workshop, “Assessing Collective Competence”. At noon, Rebecca Shunk, MD, Bridget O’Brien, PhD, and Anna Strewler, NP will present their keynote address, “High Yield Interprofessional Learning in the Workplace: For whom, how and why it matters”.

We extend thanks to our community of educators for contributions that highlight the depth and breadth of educational scholarship at UCSF. In the current climate of significant changes in both clinical care and the education of future clinicians, we are privileged to be amongst so many passionate health professions educators sharing our creative and innovative scholarly work.

Warmly,

Jason Satterfield, PhD
Professor of Clinical Medicine
Chair, The Haile T. Debas Academy of Medical Educators Scholarship Committee

Ann Poncelet, MD
Professor of Neurology
Director, The Haile T. Debas Academy of Medical Educators

Patricia O’Sullivan, EdD
Professor, Department of Medicine
Director, Research and Development in Medical Education
### Education Showcase 2017 Schedule – March 20-21

Online directory of sessions for links to evaluations, Teach for UCSF skills assessments, Livestream recordings and learning materials: [http://tiny.ucsf.edu/2017dashboards](http://tiny.ucsf.edu/2017dashboards)

**Monday, March 20: Mission Hall, 1599 4th Street at 16th Street, UCSF Mission Bay**

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<tr>
<th>Time</th>
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<tr>
<td>8:30am-10:30am</td>
<td>UCSF Education Showcase Plenary Session Presentations</td>
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<tr>
<td>MH-1400</td>
<td><em>A 10 Year Review of the Pediatric Leadership for the Underserved (PLUS) Residency Program:</em> Robert Ruelas and team</td>
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<td><em>Building Psychological Safety for Interprofessional Education on Inpatient Internal Medicine Teams:</em> Daphne Lo, MD and team</td>
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<td><em>Death-Ed: A Pilot Health Literacy and Communication of Health Care Goals Training for High Schools:</em> Dawn Gross, MD, PhD and team</td>
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<td><em>Highlighting Family Physicians’ Breadth of Practice: A Pilot Video Curriculum for Third Year Medical Students:</em> Leah Rorvig, MD, MS and team</td>
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<td><em>Safe Quality Services: A novel training approach for infection control and emergency care skills in post-Ebola (EVD) Liberia:</em> Kayla Enriquez, MD, MPH and team</td>
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<td><em>Bridging the Gap: Integrating Hypothesis-Driven Physical Exam and Clinical Reasoning to Mold the 21st Century Physician:</em> Sirisha Narayana, MD and team</td>
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<td>10:30-10:45</td>
<td>Break</td>
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<tr>
<td>10:45-11:45am</td>
<td>Keynote Address by visiting scholar Lorelei Lingard, PhD</td>
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<td><em>Are we training for collective incompetence? Three common educational assumptions &amp; their unintended impact on healthcare teamwork</em></td>
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<td>11:45-noon</td>
<td>Cooke Awards</td>
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<td>Noon-12:30pm</td>
<td>Lunch</td>
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<td>MH Lobby</td>
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<td>12:30-1:30pm</td>
<td>Mini-oral Presentations (see mini-oral schedule for details)</td>
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<td>Session A-1, MH-1400</td>
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<td>Session A-2, MH-1401</td>
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<td>1:30-2:30pm</td>
<td>Mini-oral Presentations (see mini-oral schedule for details)</td>
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<td>Session B-2, MH-1401</td>
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<td>2:30-3:00pm</td>
<td>Break</td>
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<td>3:00-5:00pm</td>
<td>Getting Projects Done: Tools for Helping Learners Stay on Track</td>
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<td>3:00-5:00pm</td>
<td>HEALS Workshop: Addressing Diversity in the Educational Setting</td>
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<td>8:00am-noon</td>
<td>Workshop: Steps to Effective Course and Curriculum Development</td>
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<td>CL-221/222</td>
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<td>8:30am-11:00am</td>
<td>Workshop: Assessing Collective Competence</td>
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<td>CL-220/223</td>
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<td>11:30am-noon</td>
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| Noon-1:00pm     | Keynote Address by Rebecca Shunk, MD, Bridget O'Brien, PhD and Anna Strewler, NP  
|                 | *High Yield Interprofessional Learning in the Workplace: For whom, how and why it matters* |
| 1:00-2:00pm     | Mini-oral Presentations (see mini-oral schedule for details)  
|                 | Session C-1, CL-221                                   |
|                 | Session C-2, CL-213                                   |
| 2:00-2:45pm     | Mini-oral Presentations (see mini-oral schedule for details)  
|                 | Session D-1, CL-221                                   |
|                 | Session D-2, CL-213                                   |
| 2:30-3:00pm     | Break                                                  |
| 3:00-5:00pm     | Workshop: Educational Strategies to Promote Clinical Reasoning  
| CL-221/222      |                                                        |
| 3:00-5:00pm     | Workshop: Developing Habits that Contribute to Faculty Wellness: Cultivating Resilience  
<p>| CL-220/223      |                                                        |</p>
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<td>02</td>
<td>Are Longitudinal Integrated Clerkships at a Tipping Point? A North American Survey of Internal Medicine Clerkship Directors</td>
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<td>Texting While Driving: A Prospective Feasibility Study of Morning Podcasts to Improve Clinical Education Skills Among LIC Preceptors</td>
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<td>The Master Clinician Flexible Residency Program in Neurology</td>
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<td>Residents as Preceptors in a Longitudinal Integrated OB/GYN Clerkship: A Pilot Program</td>
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<td>An interprofessional longitudinal clinical elective: co-managing patients with chronic medical and mental health conditions</td>
<td>Birch</td>
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<td>Spaced Education Review Curriculum for Obstetrics and Gynecology Third-year Longitudinal Clerkships</td>
<td>Copeland</td>
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<td>Diversity and inclusion competencies for faculty educators</td>
<td>Nishimura</td>
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<td>The Need for an Integrated Diversity Curriculum for Neurology Residency</td>
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<td>Baseline Measures of Interdisciplinary Pediatric Learners’ Transgender-Related Knowledge and Clinical Self-Efficacy</td>
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<td>Incorporating Transgender Health into Problem Based Learning. A Case Study and Evaluation at the Joint Medical Program</td>
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<td>Development of Expert HIV Consultation Skills through Interprofessional Training for Early Career Professionals</td>
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<td>48</td>
<td>Defining Grit in Pharmacy Learners and Predictive Value for Academic Performance</td>
<td>Gruenberg</td>
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<td>26</td>
<td>Early Medical Students in Novel Health Systems Improvement Curriculum</td>
<td>Soong</td>
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<td>27</td>
<td>Interprofessional student co-management of skilled nursing facility patients</td>
<td>Byerly</td>
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<td>New team model improves interprofessional education for internal medicine residents</td>
<td>Zhang</td>
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<td>42</td>
<td>Uncharted Territory: A post-graduate residency curriculum for Psychiatric Mental Health Nurse Practitioners (PMHNP)</td>
<td>de Lisser</td>
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<td>54</td>
<td>Impact of Charge Data on First-Year Medical Student Decision-Making: Teaching High Value Care to Early Learners</td>
<td>Nguyen</td>
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<td>59</td>
<td>Improving interprofessional team communication, patient care and safety in a primary care clinic through a longitudinal quality improvement initiative</td>
<td>Desai</td>
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<td>05</td>
<td>The Effect of Emotions and Participant Role on Simulation Learning</td>
<td>Rogers</td>
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<td>13</td>
<td>Aha! Moments: Breakthroughs in learning lumbar punctures and implications for instruction</td>
<td>Kant</td>
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<td>18</td>
<td>Lessons of a Pilot: Inpatient Hospital Medicine Microsystem Teaches Systems-Based Practice and Clinical Skills to Medical Students</td>
<td>Mills</td>
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<td>28</td>
<td>Integration of a Community Pharmacy Simulation Program into a Therapeutics Course</td>
<td>Shin</td>
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<td>37</td>
<td>Simulation Training in the Treatment of Gynecological Malignancies with Brachytherapy</td>
<td>Singer</td>
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<td>56</td>
<td>The Status of Structured Robotic Curricula at General Surgery Residencies: Curricular Gaps and Future Needs</td>
<td>Green</td>
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<td>57</td>
<td>Technical skill improvement with surgical preparatory courses: what advantages are reflected in residency?</td>
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## Education Showcase 2017 Mini Oral Presentation Schedule

**Tuesday, March 21, Parnassus Library**

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Keynote Addresses

Are we training for collective incompetence? Three common educational assumptions & their unintended impact on healthcare teamwork?

Lorelei Lingard, PhD

Lorelei Lingard is an internationally recognized researcher in the study of communication and collaboration on healthcare teams. She is Professor in the Department of Medicine, and Director of the Centre for Education Research & Innovation, both at the Schulich School of Medicine & Dentistry at Western University. With a PhD in Rhetoric, Dr. Lingard brings a unique approach to the field. For almost 20 years, she has studied the communication practices of clinical teams, in order to support evidence-based educational initiatives to improve teamwork. Her work has been supported by more than 70 competitive grants, and has produced more than 200 peer-reviewed manuscripts and book chapters. In recent years, Dr. Lingard has been using her research on teamwork to shift the discourse of ‘competence’ in medical education, so that we are paying attention to not only individual competence but also collective competence. In 2014, Dr. Lingard was awarded the prestigious appointment of Fellow of the Canadian Academy of Health Sciences, in recognition of the impact of her work on Canadian healthcare. In 2017 she was awarded the Meredith Marks Award for Mentorship in Medical Education.

In addition to giving the Keynote Address on March 20, Dr. Lingard will present a workshop on Assessing Collective Competence on March 21.

“High Yield” Interprofessional Learning in the Workplace: For whom, how and why it matters

Rebecca Shunk, MD, Associate Clinical Professor in the Dept. of Medicine is the Physician Co-Director and one of the founders of the Center of Excellence in Primary Care Education at the SF VA Medical Center since 2011. She also serves as the Associate Chief of Staff Education for the VA and is a member of the UCSF Academy of Medical Educators.

Anna Strewler, NP, Assistant Clinical Professor in the School of Nursing, Dept. of Community Health Systems, has been the NP Co-Director of the Center of Excellence since 2016. Anna started as a nurse practitioner trainee in the Center of Excellence in 2014 and advanced to her leadership position within a few years.

Bridget O’Brien, PhD, Associate Professor in the Dept. of Medicine and Researcher in the Center for Faculty Educators, directs Evaluation and Scholarship for the Center of Excellence. She played a major role in the design of the EdPACT program.
The Cooke Award for the Scholarship of Teaching and Learning

Presented by Molly Cooke, founding director of the Haile T. Debas Academy of Medical Educators

The Academy is pleased to continue the Cooke Award for the Scholarship of Teaching and Learning, established in 2007 to recognize outstanding scholarly works presented at Education Showcase. All submissions to Education Showcase are eligible for these awards, which are accompanied by an honorarium. Top-scoring projects were nominated for the award following a blinded peer review of all abstract submissions. Award winners were determined by a ballot in which Scholarship Committee members ranked the blinded abstracts, excluding those in which they were involved.

Please join us in congratulating the 2017 recipients:

Daphne Lo, MD; Kathryn Eubank, MD; G. Michael Harper, MD; Michi Yukawa, MD, MPH and Bridget O'Brien, PhD for their work:

Building Psychological Safety for Interprofessional Education on Inpatient Internal Medicine Teams

Kayla Enriquez, MD, MPH, UCSF; Michelle Niescierenko, MD, MPH, Boston Childrens Hospital and Kanagasabai Udhayashankar, MD, MPH, John F. Kennedy Medical Center, Liberia for their work:

Safe Quality Services: A novel training approach for infection control and emergency care skills in post-Ebola (EVD) Liberia
A 10 Year Review of the Pediatric Leadership for the Underserved (PLUS) Residency Program

Robert Ruelas, B.A., UCSF SOM; Daniel West, M.D., UCSF Benioff Children's Hospital and Department of Pediatrics, UCSF; Jyothi Marbin, M.D., UCSF, Benioff Children's Hospital Oakland, Oakland; Christy Boscardin, Ph.D., Department of Medicine, UCSF; Manuel Gonzales, M.A., UCSF SOM; Anda Kuo, M.D., Department of Pediatrics, UCSF

**Area(s) abstract covers:** GME

**DOMAIN(S) ADDRESSED:**
Curricular Innovation  
Evaluation of Programs  
Leadership  
Residency

**Category:** Curriculum Evaluation/Educational Research

**Abstract:**

Purpose: This program evaluation aims to identify key program elements and impact on participants of the Pediatric Leadership for the Underserved (PLUS) program.  

Background: Despite demand for physician leadership, few residency programs explicitly teach leadership skills. PLUS set out in 2004 to develop physicians ready to lead systems changes for vulnerable populations. A 2010 publication on the PLUS program demonstrated feasibility, high participant satisfaction, and initial impact on career trajectory.  

Methods: PLUS participants completed surveys at three time points: entrance, exit, and five years post-graduation. The surveys collected quantitative and qualitative data regarding program experience and impact from 2005-2015. We matched participant data across surveys and calculated statistical difference via paired t-test using SPSS.  

Results: Completion rates for entrance, exit, and alumni surveys were 100%(44/44), 94%(32/34), and 88%(14/16) respectively. 64%(9/14) of alumni are in salaried positions of leadership. The program components most valued by alumni (1(no value) to 7(maximum value)) are: Cohort/Colleagues(mean=5.07), Leadership Curriculum(mean=4.5), and the Inspirational Individual Series(mean=4.36). Residents gained confidence in their ability to develop a career in leadership over time(38%(entrance) vs 97%(exit) p<.001 ). Residents agree that a program like PLUS is important for future leaders (86%(12/14)). 100% of alumni report using leadership skills they learned in PLUS.  

Discussion/Dissemination: Critical elements of our leadership development program include a professional community, a curriculum that pairs didactics with experiential learning, and exposure to career paths. Participation has a positive impact on leadership confidence and imparts skills alumni continue to use. We will submit a manuscript for publication.  

Reflective Critique: We have modified the survey based on feedback from participants. Data from the surveys is actively incorporated into programmatic revisions via the program director and program curriculum committee.
Abstract ID: 31

**Building Psychological Safety for Interprofessional Education on Inpatient Internal Medicine Teams**

Daphne Lo, MD, University of California San Francisco; Kathryn Eubank, MD, University of California San Francisco; G Michael Harper, MD, University of California San Francisco; Michi Yukawa, MD, MPH, University of California San Francisco; Bridget O’Brien, PhD, University of California San Francisco

**Area(s) abstract covers**: GME

**DOMAIN(S) ADDRESSED**:  
Curricular Innovation  
Interprofessional Education  
Research  
Residency

**Category**: Curriculum Evaluation/Educational Research

**Abstract**:

Purpose/Background / The interprofessional Patient Aligned Care Team (iPACT) is a novel inpatient Internal Medicine (IM) team model designed for interprofessional education (IPE) and patient care. In a pilot survey, residents rated iPACT’s learning environment (LE) superior to traditional teams’. This may be due to psychological safety (PS), a team LE where members feel safe taking interpersonal risks. This study uses the construct of PS to explore factors contributing to iPACT’s LE. / Methods / This case study included data from purposively sampled direct observations of team member interactions in the iPACT work room and semi-structured interviews with iPACT attendings, residents, and IP staff team members. Two investigators analyzed observation field notes and interview transcripts in a two-step coding process and triangulated themes to draw conclusions. The UCSF IRB approved this study. / Results / The principle investigator completed 16 observations and 11 interviews from July 2015 to April 2016. Consistent with PS, residents and IP staff described a LE characterized by close interpersonal relationships, respect for team members’ expertise, and trust in each other. Key factors of iPACT’s PS include co-location of team members which allowed for close interpersonal relationships and deep understanding and respect for each other’s work. IP staff also deliberately established an open and safe LE despite many team members’ transience. iPACT PS lead team members to seek each other’s input to fill knowledge gaps and approach unintended outcomes as a safe learning opportunity. / Discussion/Dissemination / Findings can potentially alter the distribution of staff and space within hospitals to support work-based IPE and collaborative IP patient care. The authors plan to publish and present this work in peer-reviewed journals and national conferences, respectively. / Reflective Critique / This work is part of a larger master’s thesis which revealed how team congregant space and leadership can impact team LEs. Findings can inform and improve work-based GME IPE and patient care.
Death-Ed: A Pilot Health Literacy and Communication of Health Care Goals Training for High Schools

Dawn Gross, MD, PhD, UCSF and Zuckerberg San Francisco General Hospital; Jessica Nutick-Zitter, MD, MPH, Highland Hospital and UCSF

Area(s) abstract covers: High School Student Health Education

DOMAIN(S) ADDRESSED:
Communication
Curricular Innovation
Health Care

Category: Curriculum Development

Abstract:
Purpose: Death-Ed aims to transform the taboo around talking about death. We hypothesize this will help our youth become skilled at communicating what matters most to them, particularly around health care goals. / / Background: Sex education, a skills-based, education for youths, designed to transform a taboo subject, has demonstrated health benefits. Most people are similarly uncomfortable talking about death. As a result, many people experience increased distress around end of life care. Research has shown that communicating healthcare goals aligns care delivery, improving quality of life. / / Methods: Needs assessments began with two teen focus groups and two sets of health educators from bay area high schools. Curriculum is designed to be highly interactive and practice-based as informed by focus groups and a nationally adopted model of sex-education. Content includes creating a safe space, distinguishing myths versus reality, and practicing goals of care conversations. Course length varies based on local school needs. / / Results/Evaluation Plan: Plans for evaluation include quantitative and qualitative pre- and post surveys. Surveys are designed to explore attitudes toward and exposure to death. Baseline knowledge of care options at the end of life is also assessed. Post-surveys specifically aim to determine the ability of Death-Ed to change behavior, attitudes and enhance knowledge. / / Discussion/Dissemination: Portions of Death-Ed’s interactive curriculum has been offered in workshops. Once data from pilot course surveys is acquired, Death-Ed can be published and presented as a model for curriculum development at academic conferences. Dissemination of Death-Ed has already begun as a result of its selection as a “Top Idea” on a web-based call for innovations in end of life prompting schools and health educators to request engagement. / / Reflective Critique: Post-surveys will elicit qualitative feedback on most and least valuable content. These results will be reviewed with school health educators to aid in modifying content delivery. / / /
Highlighting Family Physicians’ Breadth of Practice: A Pilot Video Curriculum for Third Year Medical Students

Leah Rorvig, MD, MS, UCSF Family & Community Medicine Resident; Margo Vener, MD, MPH, UCSF Department of Family & Community Medicine

Area(s) abstract covers: Medical Student Education (UME)

DOMAIN(S) ADDRESSED:
Career Choice
Clinical Instruction and Performance
Competencies
Primary Care

Category: Curriculum Development

Abstract:
Purpose / To develop and pilot an asynchronous, video-based curriculum to increase medical students’ knowledge of the breadth of practice available to family physicians. / / Background / Research demonstrates that contact with family physicians and their varied fields of practice attracts students to the field. However, UCSF third year medical students (MS3s) are assigned a single clinical site for their family medicine clerkship, limiting their exposure to practice options. / / Methods / We conducted a targeted needs assessment of 20 MS3s in October 2016 and found that a majority of students were able to identify geriatrics as a field of practice of family physicians. However, fewer than one third of students were able to identify the fields of family planning, HIV care, and addiction medicine. Based on these results we are developing a pilot three-video series to target under-recognized fields. Each video highlights a physician’s passion for their unique field of practice and includes three clinical pearls that link the video to the week’s content in the family medicine clerkship chronic care curriculum. / / Evaluation Plan / Students’ satisfaction with the videos will be qualitatively evaluated through focus groups. The qualitative data will be assessed using thematic analysis. / / Discussion / According to the Society of Teachers of Family Medicine, by the end of a family medicine clerkship MS3s should be able to discuss the critical role of family physicians within a health care system. Our novel, inexpensive, and dynamic pilot project may help UCSF MS3s expand their knowledge of the many roles of family physicians. Furthermore, this video format could easily be adopted by other fields seeking to efficiently disseminate clinical information while spotlighting community physicians. However, ensuring consistently high quality content may prove challenging. / / Reflective Critique / This project has been developed through the lead author’s participation in the UCSF Health Professions Education Pathway. This abstract was presented at an HPE works in progress and subsequently edited.
Safe Quality Services: A novel training approach for infection control and emergency care skills in post-Ebola (EVD) Liberia

Kayla Enriquez, MD, MPH, UCSF; Michelle Niescierenko, MD, MPH, Boston Childrens Hospital; Kanagasabai Udhayashankar, MD, MPH, John F. Kennedy Medical Center, Liberia

Area(s) abstract covers: CME

DOMAIN(S) ADDRESSED:
Global Health
Patient Care
Infection Prevention and Control

Category: Curriculum Evaluation/Educational Research

Abstract:
Safe Quality Services: A novel training approach for infection control and emergency care skills in post-Ebola (EVD) Liberia / Purpose: Improve knowledge of Infection Prevention and Control (IPC) and basic emergency care skills during healthcare provision in the non-EVD context. / Background: During the West African EVD outbreak, healthcare workers (HCWs) were fearful to provide care due to the risk of contracting EVD and not understanding IPC practices. The duration of the outbreak and conflicting messages regarding IPC resulted in HCW desensitization as well as delay in patient care. These behaviors demonstrated the need for a standardized national training in IPC and emergency care to improve both technical areas in the routine delivery of healthcare. / Methods: Train hospital HCWs in a Liberia specific, post-EVD, IPC and emergency care skills package, Safe Quality Services. This training combines didactic, case based learning and simulation to deliver content in either a 2-day or 4-day format for non-clinicians (NC) and clinicians (C), respectively. Knowledge acquisition was measured using pre and post testing and application of knowledge was assessed through scored skills checklists (NC) or integrated patient scenarios (C). / Results: Our organization partnered with 30 of 38 Liberian hospitals for a total of 3,779 HCWs trained (61.5% C, 38.5% NC). Among all HCWs trained, the post testing score improvement was 21% better than the predicted 10% (p<0.0001). On practical skill assessment, for every 10 percentage points better on the didactic test, one additional practical task was done correctly on the skills checklist or the integrated case scenarios. / Discussion: Liberian HCWs demonstrated the ability to gain significant knowledge in IPC and emergency care despite desensitization due to previous training fatigue. HCWs also showed that practical application of this knowledge improves with didactic knowledge. Findings will be made available to colleagues through oral presentation and journal publication. / Reflective Critique: CDC feedback on adult learning styles
Bridging the Gap: Integrating Hypothesis-Driven Physical Exam and Clinical Reasoning to Mold the 21st Century Physician

Sirisha Narayana, MD, UCSF; Joshua Stein; Anita Richards; Allison Ishizaki, Denise Connor, MD, VAMC; Heather Nye, MD/PhD, VAMC; Anna Chang, MD, UCSF; Susannah Cornes, MD, UCSF

Area(s) abstract covers: Medical Student Education (UME)

DOMAIN(S) ADDRESSED:
Assessment and Testing
Curricular Innovation
Evaluation of Programs
Standardized Patients

Category: Curriculum Development

Abstract:
Purpose: The physician medical history and physical exam (PE) are core skills that yield critical data for clinical decisions. The ability to perform an accurate and appropriate history and PE requires application of clinical reasoning. We created a series of seven integrated clinical skills (ICS) workshops to foster the application of the hypothesis-driven clinical encounter in early learners.

Background: Missed and misinterpreted history and PE findings contribute to medical error. Experts advocate learning hypothesis-driven strategies to integrate clinical reasoning and improve sensitivity and specificity of clinical findings. The implementation of the new Clinical Microsystems Clerkship enabled a redesign of the direct patient care skills curriculum using standardized patient (SP) encounters for hypothesis-driven skills teaching.

Methods: With expert input, we developed seven ICS workshops in which learners applied hypothesis driven strategies after watching skills-based videos and completing an online self-assessment. Each workshop emphasized the application of a standard clinical reasoning framework, including the development of a problem representation, and differential diagnoses, with or without an illness script. Students received feedback on history-taking, PE, communication, and application of clinical reasoning.

Results: Clinical reasoning was assessed as part of an observed standardized clinical encounter (OSCE) mid-way through the ICS curriculum. Learners were asked to provide a problem representation, differential diagnosis and illness script following a novel SP station. PE and history scores were calculated across three stations. Students performed favorably.

Discussion: An integrated clinical skills curriculum incorporating hypothesis-driven history and PE, and clinical reasoning principles, is feasible and may foster integration of previously isolated clinical skills techniques.

Reflective Critique: Additional evaluation of the curriculum will include OSCE’s and focus groups with students and faculty.
Teaching Procedural Skills

Led by: Darren Fiore, MD and Ellen Laves, MD

This workshop will introduce participants to the specific skills associated with teaching procedures. This is a teaching activity that takes careful planning to ensure that the learner makes progress toward mastering a skill. The workshop will incorporate didactic points about teaching procedures and offer opportunities for the participants to practice.

At the end of the workshop, participants will be able to:

- Translate the six steps of curriculum development into procedure teaching.
- Describe the conceptual framework of deliberative practice as it applies to teaching procedures.
- Demonstrate the conceptual framework by simulating procedure education.
- Give effective feedback on learning performance in a real-time patient-care setting.
- Set personal goals for applying the skills learned in this workshop to one’s own practice setting, and review a tool designed to assess performance of new teaching skills.

Time-Efficient Clinical Teaching

Led by: Tali Ziv, MD

This session will discuss strategies to increase teaching efficiency in the clinical setting and expose participants to the One-Minute Preceptor Model, a model for teaching in the clinical setting.

During the session, participants will:

- Share tips/strategies with other faculty on how to teach efficiently
- Practice their teaching skills in different clinical scenarios
- Discuss the pros and cons of common teaching models

At the end of the session, participants will be able to:

- Apply the One-Minute Preceptor model in a clinical teaching situation
- Describe strategies for increasing teaching efficiency in the clinical setting

IPE Strategies: Aha! Capitalizing on IP Teachable Moments

Led by: Amber Fitzsimmons, PT, MS, DPTSc, Bridget O’Brien, PhD

Note: Participants must complete an online module before the workshop, along with the related skills assessment. Links can be found at [http://tinyurl.com/UCSFIP4](http://tinyurl.com/UCSFIP4). It can be challenging to teach a multiprofessional group of learners. This workshop aims to provide faculty with concrete ways to improve their skill in seizing the moment for teaching opportunities, with the ultimate goal of working as a team toward modeling best interprofessional teaching practices for both learners and peers.

By the end of this workshop, participants will be able to:

- Identify barriers associated with teaching learners from multiple professions.
- Identify critical elements of an IP teachable moment
- Implement strategies to facilitate IP learning in real time
During this session, participants will:
- Identify barriers associated with teaching learners from multiple professions
- Identify critical elements required for an IP teachable moment
- Practice using new strategies to facilitate IP learning in real time

Introduction to Simulation: Why, When, What?

Led by: Sandrijn van Schaik, MD

This session provides faculty and trainees with an overview of the use of simulation in medical education, to set the stage for continued learning through the Teach for UCSF Certificate in Simulation Teaching, or as a refresher for those experienced in simulation at other institutions. Included are the rationale for use in learning and assessment, benefits to patient safety, as well as advantages to learning and patient care from the point of view of the institution. Along with an introduction to characteristics of effective simulations, this session addresses the importance of applying principles of curriculum development and learning theories to designing, planning, conducting, and debriefing simulations. The session is meant as an introduction to subsequent workshops that delve into applying learning theories to these different elements of simulation with opportunities to actively practice the associated skills.

At the end of this session, participants will be able to:
- Define and describe simulation
- Explain the rationale for using simulation in health professional education
- List best practices for the use of simulation as an educational strategy
- Find your way to various simulation resources at UCSF and beyond

Challenges in Clinical Teaching

Led by: Charlotte Wills, MD

This workshop goes beyond the common clinical teaching models learned in Time Efficient Teaching, such as the One Minute Preceptor Model, to focus on how to apply these and other teaching tools to challenging teaching situations.

During this session, participants will:
- Identify the challenges to clinical teaching that we share, and those that are unique to our own clinical settings.
- Review the teaching techniques and tools that we can apply to these teaching challenges.
- Work in groups to practice and share solutions to challenging teaching settings and learners.

At the end of this session, participants will be able to:
- Identify the types of challenges presented by the variety of settings we teach in and diverse learners we encounter.
- Describe teaching strategies that could be helpful in addressing various challenging clinical teaching scenarios.
- Apply strategies for teaching in diverse clinical settings.
- Set personal goals for applying the skills learned in this workshop to one's own practice setting and learners.
Planning and Designing Mannequin-Based Simulation Scenarios

Led by: Sandrijn van Schaik, MD, PhD

Are you ready to move forward with designing a simulation session? Do you know how the Kanbar Center can assist you in creating a simulation session? This workshop will cover how to plan and design a mannequin-based simulation session, with an emphasis on effective scenario design.

During this workshop, participants will:
- Review the resources available at the Kanbar Center;
- Discuss features that characterize effective simulation-based education;
- Practice writing appropriate learning objectives and using a simple template for scenario design.

At the end of the workshop, participants will be able to:
- Plan a simulation session utilizing high-fidelity mannequins;
- Create clear objectives for a simulation session;
- Design a simulation scenario appropriate for your learners.

Competency-Based Education and Assessment

Led by: Patricia O'Sullivan, EdD and Erick Hung, MD

Now that educational programs are expected to address the six general competencies, faculty must begin to think about the teaching and assessment methods they use. Faculty need to learn to use program-wide performance data to inform curricular change. Participants will spend the afternoon discussing their current teaching and assessment methods, implementation strategies and challenges. For each competency several best practices will be identified and shared.

At the end of this session, participants should be able to:
- Examine their program’s evaluation system in light of others’ experiences.
- Identify best teaching and assessment practices and understand what has led to their success.
- Consider the steps necessary to prepare your program for a site visit.
- Identify effective methods for teaching that target the competency areas.
- Set personal goals for applying the skills learned in this workshop to one's own practice setting, and review a tool designed to assess performance of new teaching skills.

Conducting Scenario-Based Simulations

Led by: Sandrijn Van Schaik, MD, PhD

So you have your scenario and you have planned out your session, but how do you ensure that your simulation session is effective? In this workshop, we will review the concept of fidelity, or how a scenario can be made realistic. We will address the roles that equipment, environment, and psychology play in fidelity.

During this session, participants will:
- Learn how to optimize fidelity;
- Discuss the pros and cons of the use of confederates;
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- Review various approaches to the instructor role;
- Discuss common challenges and practice dealing with unexpected developments.

At the end of this workshop, participants will be able to:
- Explain the concept of fidelity and its different components;
- Create an effective learning experience by enhancing fidelity;
- Anticipate common pitfalls in conducting simulation sessions;
- Set personal goals for applying the skills learned in this workshop to one's own practice setting, and review a tool designed to assess performance of new teaching skills.

Finding Clarity: Establishing Goals and Expectations for Clinical Learners

Led by: David Irby, PhD

Teachers and learners can both benefit from clear goals and expectations. Teachers often find themselves teaching without a good sense of what they are trying to accomplish, and consequently struggle with planning or focusing the interaction. Students learn in multiple settings with different teachers, all of whom can have variable expectations which are often not clear.

Clearly established goals and expectations will allow the learner to know what he or she should master, guide the teaching in planning the teaching session, and provide both teachers and learners with a basis for evaluation and feedback. After revealing ways to create a positive learning climate, this session will describe how to effectively establish, express, and negotiate goals and expectations. By the end of this workshop, participants will be able to:
1. List three techniques to improve the learning climate
2. Recognize the effective establishment and expression of learner goals
3. Demonstrate the expression and negotiation of learner goals
4. Appreciate the importance of clearly establishing goals and expectations

IPE Strategies: Setting the Stage for Interprofessional Teaching

Led by: Josette Rivera, MD and Conan MacDougall, PharmD, MAS

The recent creation of national accreditation and competency standards for interprofessional education in health professions training underscores the importance of improving the ability of trainees to work collaboratively. At UCSF, as interprofessional learning experiences and practice models are expanding, faculty development in interprofessional education and practice (IPE/P) is increasingly critical to both grow and sustain IPE initiatives. Many faculty have had only limited exposure to IPE during their own training, and are unfamiliar with the principles of effective IPE/P. This blended learning experience aims to introduce fundamental concepts and to prepare educators in setting the stage for interprofessional teaching in their settings.

Prerequisites:
Participants must have completed an online module before the workshop, along with the related skills assessment. To access the module and the skills assessment, go to: https://wiki.library.ucsf.edu/x/xgnaFQ

During this workshop, participants will:
- Review definitions, core concepts, and resources for IPE
• Reflect on current practice environments and consider how role modeling, the hidden curriculum, and a collaborative culture impact interprofessional teaching
• Examine student comments about IPE experiences at UCSF and reflect on what works/does not work
• Apply concepts discussed to your own teaching activities

At the end of this workshop participants will be able to:
• Explain to a new faculty member what interprofessional education (IPE) is and its four core competency domains
• Describe how IPE is integrated into health professions training programs at UCSF
• Describe skills essential for IPE that may differ from those used in teaching trainees of one’s own profession
• Analyze their workplace to identify barriers to interprofessional practice and education and propose solutions
• Review the UCSF IPE Passport rubric and apply to current and/or planned IP teaching activities

**Debriefing a Scenario-Based Simulations**

Led by: Darren Fiore, MD

Debriefing is often considered to be the most important aspect of a simulation session, and facilitating effective debriefing is an essential skill that requires practice. In this workshop, participants review the goals of debriefing, learn debriefing techniques, and have an opportunity to practice debriefing skills. The instructors and the participants consider common challenges and potential solutions.

At the end of the workshop, the participants will be able to:
• List the different models for debriefing.
• Apply common debriefing skills.
• Manage pitfalls frequently encountered in debriefing.
• Set personal goals for applying the skills learned in this workshop to one's own practice setting, and review a tool designed to assess performance of new teaching skills.

**Using SOAP for Learner Professionalism**

Led by: Andrea Marmor, MD, MSEd and Vanessa Thompson, MD

Professionalism is a required competency for medical trainees. However, faculty may need a framework for thinking about the components of professionalism, tools to identify learners with challenges in this area, and strategies to help these learners succeed. In this workshop, we discuss the components of professionalism that we expect in medical trainees, as well as a framework for understanding and describing professionalism problems that we may encounter with our learners. Participants will practice an approach to identifying and assessing the struggling learner, share ideas for dealing with professionalism problems, and leave with a practical list of tips and references.

During this workshop, participants will:
• Generate and discuss definitions of medical professionalism, and categories of unprofessional behavior
• Learn an adaptation of the SOAP model for identifying, approaching and assessing learners with professionalism challenges
• Practice these skills in a breakout session, using realistic educational scenarios.
• Discuss available techniques, tools and resources for helping a learner struggling with professionalism.

At the conclusion of this workshop, participants will be able to:
• Recognize categories of professionalism challenges in learners.
• Apply the SOAP model to help further understand and assist learners in difficulty.
• Demonstrate strategies for communicating about professionalism concerns with a learner.
• Develop an initial approach to addressing professionalism issues in trainees.
**Getting Projects Done: Tools for Helping Learners Stay on Track**

Led by: Nardine Riegels, MD; Amber Fitzsimmons, PT, MS, DPTSc and Nina Garga, MD

This workshop is relevant for faculty and preceptors who work with learners to complete curricular, scholarly or QI/PS projects. The workshop leaders will share strategies and tools to help faculty define roles within a project, and keep learners engaged and on schedule.

By the end of this workshop, participants will be able to:

- Map the distinct phases in a project and, for each stage, identify key activities that advisers and advisees need to accomplish
- Use a tool to provide structure to the project.
- Identify common challenges that emerge in these situations and strategies to overcome them

**HEALS Workshop: Addressing Diversity in the Educational Setting**

Led by: Erica Monasterio, RN, MN, FNP, Clinical Professor, Family Health Care Nursing and Elida Bautista, PhD, Associate Professor, Psychiatry

“Differences Matter” has called attention to the issues facing our learning and patient-care environment regarding issues of diversity and inclusion. At UCSF we are fortunate to have a commitment to addressing diversity at the institutional level and we recognize that the School of Nursing has had an active commitment in this area. This workshop will help in providing skills to address challenging situations in our learning environment.

At the end of this workshop, participants will:

- Clarify the meaning of terms such as stereotyping, unconscious bias, etc.
- Employ a framework for addressing challenging issues of bias in the educational setting.
- Devise a strategy to guide response to challenges in the moment or as a follow up.
- Experts in the field of diversity will lead this workshop and provide important background. Participants will engage with real scenarios generated by faculty in the workshop.
**Steps to Effective Course and Curriculum Development**

Led by: Annette Carley, RN, DNP, NNP, PNP and Alissa Peterson, MD

Do you need to develop a module (online or not), series of classes, course, instructional unit, or program? Have you been developing curricula for many years? Learn to do it the right way. This workshop introduces faculty of all levels to a practical, theoretically sound approach to developing curriculum. During the workshop, participants will work through a six-step process, taking time in small groups to practice the skills learned with expert guidance nearby:

- Identify a problem or need to be solved
- Examine the particular needs of your learners
- Develop goals and measurable learning objectives
- Choose educational strategies that best fit your material
- Devise steps for implementation
- Consider evaluation and feedback

At the end of this workshop participants will be able to:

- Describe Kern’s 6-step process for curriculum development
- Discuss the importance of conducting a needs assessment in curriculum development
- Write SMART-er learning objectives
- Discuss the importance of matching objectives to learning strategies
- Set personal goals for applying the skills learned in this workshop to one’s own practice setting, and review a tool designed to assess performance of new teaching skills.


**Assessing Collective Competence**

Led by: Lorelei Lingard, PhD and Christy Boscardin, PhD

In small groups, participants will consider how/whether this new concept fits with the existing frameworks of objectives and competencies that inform their assessment practices. Participants will work in small groups to describe the key dimensions of these frameworks and their overlap or conflict with the concept of collective competence. Exploring our sense of consonance and dissonance of fit between current practices and the concept of collective competence, we will work together to develop strategies for integrating the concept of collective competence into existing assessment practices.

Objectives:

- To consider how the concept of ‘collective competence’ may be consonant or dissonant with existing assessment approaches and instruments
- To discuss strategies and challenges related to integrating ‘collective competence’ into existing assessment practices
Developing Habits that Contribute to Faculty Wellness: Cultivating Resilience

Led by: Joseph G. Cook, MA and Anand A. Dhruva, MD

Faculty are experiencing high levels of stress and burnout. While this issue raises great concern and a variety of programs are proposed to help with faculty resilience, faculty need tools that they can use in the context of everyday work, and also with their learners.

At the end of this session, participants will:

- Identify strategies that they can use in the workplace to cope with stress and burnout.
- Describe the relationship between long term habits and use of these strategies.
- Recognize habits that would be valuable to suggest to learners.
- Leaders from the UCSF Osher Center for Integrative Medicine will lead this session. Individuals will get to practice different strategies to consider what works well for them. They will discuss how to bring up wellness strategies with their learners.

Educational Strategies to Promote Clinical Reasoning

Led by: Doranne Donesky, RN, PhD, NP and Kenny Banh, MD

Clinical reasoning is central to student and resident physicians’ professional development. We know it when we see it and we know when it is missing, yet it is hard to describe the elements of successful clinical reasoning. It is even more challenging to devise educational strategies that specifically focus on promoting reasoning for both struggling and successful learners.

During the workshop, participants will:

- Learn the basic components of diagnostic reasoning.
- Analyze challenging cases of learners with clinical reasoning difficulties.
- Review educational techniques that promote diagnostic reasoning.

At the end of the session, participants will be able to:

- Describe the current knowledge and vocabulary pertaining to diagnostic reasoning.
- Determine a learner’s clinical reasoning deficit and propose an educational strategy.
- Employ teaching methods that promote the development of clinical reasoning.
- Set personal goals for applying the skills learned in this workshop to one’s own practice setting, and review a tool designed to assess performance of new teaching skills.
Abstract ID: 02

**Are Longitudinal Integrated Clerkships at a Tipping Point? A North American Survey of Internal Medicine Clerkship Directors**

Lindsay Mazotti, MD, Kaiser Permanente; Jennifer Adams, MD, University of Colorado School of Medicine; Bruce Peyser, MD, Duke University School of Medicine; Katherine Chretien, MD, George Washington School of Medicine; Briar Duffy, MD, University of Minnesota School of Medicine; David Hirsh, MD, Harvard Medical School

**Area(s) abstract covers:** Medical Student Education (UME)

**Domain(s) addressed:** Longitudinal Educational Activities

**Category:** Curriculum Evaluation/Educational Research

**Abstract:**

**Purpose:** This study aims to quantify the number of current and planned longitudinal integrated clerkships (LICs) at North American (NA) medical schools and to characterize the purpose of starting LICs. We consider if LICs have reached a tipping point, with the innovation now self-propagating.

**Background:** LICs are an example of educational innovation, fueled by a desire to improve educational continuity and address the “hidden curriculum.” The number of NA institutions adopting LICs is increasing, but the extent of the change remains unknown. Clerkship Directors (CDs) in Internal Medicine (IM) can provide information on LIC program growth, as every school has an IM clerkship. CDs serve as leaders within institutions and are likely aware of or directly involved in the development of LICs.

**Methods:** In 2015, the Clerkship Directors in Internal Medicine (CDIM) survey, distributed to CDs from NA, included a section on LICs. This section queried the number of current and planned LICs, their duration and capacity, and the purpose of starting a new LIC.

**Results:** The response rate was 76% (94/123) of CDIM schools, representing 67% (94/146) of NA medical schools. Thirty six percent (n=34/94) of responding schools have ≥1 LIC. Thirty schools have year-long LICs. The majority (22/34) of LICs are <5 years old. Nineteen institutions are planning a new LIC or increasing the number of students participating in LICs, 9 of which are schools without existing LICs. CDs believe LICs are being implemented to foster continuity of care, support students’ patient-centeredness, advance interprofessional education, and address workforce shortages.

**Conclusions:** LICs are increasing across NA, especially over the last five years. We hypothesize that the increase may be due to early adopters having demonstrated the benefit of LICs, the compatibility with sought-after goals of medical education, the value of tests of change and the ability to observe the change first before adopting.

**Reflective Critique:** Feedback from this abstract will be incorporated into a manuscript.
Texting While Driving: A Prospective Feasibility Study of Morning Podcasts to Improve Clinical Education Skills Among LIC Preceptors

Tali Ziv, MD, UCSF/Kaiser Permanente; Joshua Bernstein, MD, UNC School of Medicine Asheville Campus; Joanna Drowsos, DO, MPH, MBA, Charles E. Schmidt College of Medicine, Florida Atlantic University; Sandra Whitlock, MD, UNC School of Medicine Asheville Campus; Robyn Latessa, MD, UNC School of Medicine Asheville Campus; Sarah Wood, MD, FAAP, Charles E. Schmidt College of Medicine Florida Atlantic University; George Gimol, EdD, Florida Atlantic University, Charles E. Schmidt College of Medicine; Galvin, Shelley, MA, UNC School of Medicine, Asheville Campus, Asheville, NC; Mazotti Lindsay, MD, UCSF/Kaiser Permanente

Area(s) abstract covers: CME; Faculty Development

Domain(s) addressed:
Clinical Instruction and Performance
Faculty Development
Feedback
Longitudinal Educational Activities

Category: Curriculum Evaluation/Educational Research

Abstract:
Purpose: We hypothesized that texting podcasts during morning commute hours to LIC preceptors would be feasible and well received, and would improve participation in faculty development. / Background: Limited time and clinical pressures pose challenges to faculty development (FD). Technology can potentially improve preceptor participation. / Methods: A series of five brief (5-7 minute) FD podcasts were created by LIC leaders. Pre-participation surveys were sent to all LIC preceptors at three institutions. Podcasts were texted to preceptors every other week. Upon completion of the podcast series over a 10 week period, participants returned a follow up survey focused on usefulness of the podcast and perceived change in teaching behavior. / Results: Of 235 physician preceptors invited to participate, 88 agreed, with 69 (78%) completing the pre survey, and 34 (39%) completing the post survey. In the pre-survey, preceptors attested to 15 (22%) never and 28 (42%) rarely receiving faculty development. Among post-survey responders, 27 (82%) listened to at least 3 podcasts; 21 (64%) found them moderately or very helpful; 23 (70%) perceived that the podcasts altered their teaching style; and 18 (55%) would likely or highly likely recommend the podcasts. Using the Wilcoxon signed rank test to compare the pre and post survey questions, there was no statistically significant change in self-reported specific preceptor teaching behavior. There was a non-significant trend to preceptors asking students to present in front of the patient. / Discussion: Texting brief podcasts during times of commute offers a unique method of disseminating educational material. It can be concluded that texting FD podcasts is both feasible, and well received. Our podcasts aim to share best clinical teaching techniques with LIC preceptors. We hope to explore how to disseminate podcasts to other LIC institutions and expand this mode of FD. / Reflective Critique Presented at Consortium for LICs Meeting in Toronto 2016 with feedback incorporated into manuscript, in progress.
Abstract ID: 23

The Master Clinician Flexible Residency Program in Neurology

Megan Richie, MD, UCSF; Vanja Douglas, MD, UCSF; Nerissa Ko, MD, UCSF; Susannah Cornes, MD, UCSF; Carolyn Fredericks, MD, Stanford; Karen Parko, MD, UCSF; Ann Poncelet, MD, UCSF; John, Engstrom, MD, UCSF; S. Andrew Josephson, MD, UCSF

Area(s) abstract covers: GME

Domain(s) addressed:
Career Choice
Curricular Innovation
Longitudinal Educational Activities
Residency

Category: Curriculum Development

Abstract:
Purpose / Since 2007 University of California San Francisco neurology residents have the option to dedicate part of fourth year to research, but advanced training opportunities for those with career interest in clinical neurology are lacking. The Master Clinician Flexible Residency program was therefore created aiming to embark residents upon a trajectory to become master clinicians through accelerated development of the Accreditation Council for Graduate Medical Education core competencies. / Background / Clinical expertise is relatively undervalued in academic institutions. Academic clinicians have lower promotion rates, career commitment and satisfaction. Similarly, although many neurology residency programs offer research, education, quality improvement, or global health tracks, none exist for advanced clinical neurology. / Methods / Fourth year neurology residents in the Master Clinician track will complete a curriculum including advanced clinical experiences, formal didactics and independent study. Didactics include metacognitive skills, physicianship, and high-value care. Clinical experiences include multidisciplinary activities and in-depth case analyses. Independent study components include completion of case portfolios and a capstone project. / Evaluation Plan / Program assessments include milestone evaluations by faculty, Residency In-service Training Examination results, custom examinations of master clinician techniques, and portfolio audits to evaluate real-world quality of care. Program effectiveness will be determined by rate of milestone achievement, qualitative demonstration of program teachings, and quantitative improvement of diagnostic accuracy in portfolio audits. / Dissemination / This project was presented at the Neurohospitalist Society 2015 meeting. Preliminary data will be available for conferences in the upcoming academic year. A draft for publication is underway. / Reflective Critique / Input from the authors above and Professors Patricia O'Sullivan, Gurpreet Dhaliwal, and Karen Hauer guided the formation of this program and its assessments.
Residents as Preceptors in a Longitudinal Integrated OB/GYN Clerkship: A Pilot Program

Jeannette Lager, MD, MPH, UCSF; Sara Whetstone, MD, UCSF; Melanie Maykin, MD, UCSF; Erica Manriquez, MD, UCSF; Diana Robles, MD, UCSF; Amy M. Autry, MD, UCSF

Area(s) abstract covers: Medical Student Education (UME); GME

Domain(s) addressed:
Clinical Instruction and Performance
Curricular Innovation
Feedback
Longitudinal Educational Activities

Category: Curriculum Evaluation/Educational Research

Abstract:
Purpose To evaluate a pilot program incorporating resident and faculty pairs as preceptors in OB/GYN Longitudinal Integrated Clerkships (LIC) to improve student integration in inpatient settings. Background LICs were developed to foster learning in multiple specialties over time, thereby creating continuity with patients and preceptors. Inpatient experiences are typically short, which may lead to abrupt transitions into settings with numerous providers and multi-level learners. Evaluations by residents and LIC students have highlighted frustration with the lack of team building, especially with residents. Methods Third year medical students were each assigned a resident/faculty pair. Approximately twelve sessions were split between the faculty outpatient setting and residents in their assigned settings. LIC pilot students, traditional LIC students, and residents were surveyed before and after the pilot with an electronic survey. A template approach was used to analyze the qualitative data. Results Both students and residents perceive a need for better integration of LIC students into resident workflow and the team setting. There was an improvement in the pilot students’ overall satisfaction scores compared to historical controls and traditional LIC students. Traditional LIC students expressed a desire to participate in resident/faculty pairing. Pilot LIC students had more meaningful and comprehensive feedback compared to their peers. Discussion Our findings support integration of residents as preceptors into LIC clerkships. Although scheduling is more challenging, the paired preceptorship is both feasible and beneficial. LIC students feel more integrated into clinical teams, and residents feel more connected to students. The preceptor pairs were able to collectively discuss the student’s performance in a diverse set of clinical experiences which enabled more meaningful feedback. Reflective Critique Given the logistical challenges, scheduling will be partially computer-based. We also plan to expand the pilot in order to gather a more robust number of students.
An interprofessional longitudinal clinical elective: co-managing patients with chronic medical and mental health conditions

Kara Birch, DNP, PMHNP, FNP, UCSF, SON, CHS; Amber Fitzsimmons, MS, DPTSc, PT, Dept Physical Therapy and Rehab Science; Rosalind De Lisser, MS, PMHNP, FNP, SON, CHS; Kirby Lee, PharmD, MAS, Dept of Clinical Pharmacy

Area(s) abstract covers: GME

Domain(s) addressed:
Clinical Instruction and Performance
Interprofessional Education
Patient Care
Mental Health

Category: Curriculum Evaluation/Educational Research

Abstract:
There is movement towards team-based primary care to improve outcomes in complex patients; however there are few interprofessional (IP) clinical learning opportunities to co-manage these patients over time. To address this gap we aimed to design and implement an IP clinical elective where trainees longitudinally co-manage complex patients with both medical and mental health conditions. Drawing from the IPEC competencies for Interprofessional Collaborative Practice we sought to improve learner collaboration, attitudes towards mental illness, and self-reflection on their role as a clinician team member. Two triads of Pharmacy, Physical Therapy, and Psychiatric Nurse Practitioner trainees provided team-based care to two complex primary care patients over 10 weeks. Triads engaged their patient in weekly home visits, giving each learner 30 minutes per visit to assess the patient and focus on goal setting and behavioral activation. Pre and post visit huddles allowed for discussion and treatment planning. Learner outcomes were measured pre and post elective via the Mental Illness: Clinicians’ Attitudes Scale (MICA), the Assessment for Collaborative Environments (ACE), critical reflections and course evaluations. Matched pre-post analysis revealed a non-significant trend towards lower MICA scores indicating a change to a more positive mental illness attitude and no change in ACE scores (n=6). Surveys and critical reflections revealed enthusiasm for the “real-world” longitudinal experience; the supportive team approach; collaboration with IP colleagues and faculty; and home visits. Lastly, they reported an improved understanding of fellow learners’ roles and the value of IP care. Student feedback aligned with the elective aims, linking the longitudinal experience with a deeper understanding of IP practice and the opportunity to collaborate and co-manage in a supportive environment. Feedback has led us to make improvements in coordination of transportation for the second iteration. We submitted an abstract to an international IP conference and are drafting a manuscript.
Spaced Education Review Curriculum for Obstetrics and Gynecology Third-year Longitudinal Clerkships

Daniel Copeland, BS, UCSF School of Medicine; Tracy Fulton, PhD, UCSF Department of Biochemistry and Biophysics; Allison Schneider, MD, Kaiser Permanente Oakland Medical Center - OBGYN; Jeannette Lager, MD, MPH, UCSF - OBGYN

Area(s) abstract covers: Medical Student Education (UME)

Domain(s) addressed:
Assessment and Testing
Curricular Innovation

Category: Curriculum Evaluation/Educational Research

Abstract:
Purpose / To pilot a spaced education review curriculum for third-year longitudinal students in the OBGYN clerkship, with the hypothesis that participation will improve OBGYN shelf exam scores. / Background / Traditional clinical clerkships rely upon a consolidated period of learning and testing. Such proximal assessment can skew evaluation of actual learner mastery; which studies suggest may be transient. Spaced education has been proven to be a flexible and time-efficient method of fostering retention and enhancing clinical performance. / Methods / A 25-question review curriculum was created, mapping each question to OBGYN clerkship objectives. It was piloted with 23 students at UCSF School of Medicine using the Qstream™ platform to administer questions at reactive spaced intervals. Measured outcomes included participation and shelf exam scores. Exam scores from a prior longitudinal student cohort served as controls. Cohort exam scores were compared with Student-T tests and against participation using least squares linear regression. / Results / 78% (n=23) of students utilized the curriculum. There was no difference between the exam scores of the pilot cohort and their controls (p=0.75), nor when subdivided into participant and non-participant subgroups. The subgroups themselves were statistically different (p=0.0060). Finally, the Qstream™ participation scores did not reveal a linear correlation to the participants’ exam scores (r=0.157 p=0.534). / Discussion / Overall, despite the majority of students utilizing the curriculum, there was not a statistical improvement in the pilot cohort’s exam scores. The results of the study were shared with the OBGYN clerkship administrators to guide revision. / Reflective Critique / Midpoint and endpoint surveys assessed the curriculum. Feedback was generally positive, with some students suggesting format revisions to the questions. Additionally, question analysis revealed some questions may have been too easy or difficult and warrant adjustment. This information will be applied while reviewing and editing questions for subsequent years.
Abstract ID: 4

**Diversity and inclusion competencies for faculty educators**

Holly Nishimura, BA, UCSF; Elida Bautista, PhD, UCSF; Denise Davis, MD, UCSF; Andrea Jackson, MD, UCSF; Patricia O'Sullivan, EdD, UCSF; Alejandra Rincon, PhD, UCSF; Arianne Teherani, PhD, UCSF

**Area(s) abstract covers:** Medical Student Education (UME); GME; CME;

**Domain(s) addressed:**
- Competencies
- Cultural Competence
- Diversity
- Mentoring

**Category:** Curriculum Evaluation/Educational Research

**Abstract:**
Purpose: To identify faculty educator competencies for creating an inclusive learning environment for diverse learners / Background: Educators enhance learner engagement and performance by fostering an inclusive learning environment. Therefore, we must ensure that educators possess skills to effectively teach and mentor diverse learners. We identified the Multicontextual Model for Diverse Learning Environments (MMDLE) as a framework for explaining the organizational, curricular and individual level factors that impact the learning climate and thus learners. / Methods: This study took a multi-step approach: 1) we conducted a scoping review of literature on teaching diverse learners to identify existing competencies; 2) we interviewed 12 key stakeholders; 3) we reviewed learning objectives for 7 existing diversity and inclusion curricula at UCSF targeting faculty, trainees, or staff. Lastly, we conducted thematic analysis of the objectives and mapped themes to the domains of the MMDLE. / Results: We developed 7 faculty educator competencies under 3 domains. / Domain 1 Instructor Identity / 1. Build foundational knowledge of key concepts e.g. privilege, power, unconscious bias / 2. Establish awareness of own identities / 3. Develop ability to recognize and remedy bias and discrimination / Domain 2 Pedagogy and Teaching Methods / 1. Communicate effectively across racial, ethnic, gender, social differences / 2. Develop educational skills for creating an inclusive learning environment / Domain 3 Course Content / 1. Apply curriculum development skills to include diversity in course and curricular design and content / 2. Represent and invite diverse perspectives in the structure of learning opportunities / Discussion: Competencies for teaching diverse learners will inform faculty development offerings aimed at improving the culture of inclusivity at UCSF. We have presented our work to the Differences Matter Leadership group and will present at WGEA. / Reflective Critique: We incorporated continuous feedback from stakeholders and ESCape consultants.
Abstract ID: 6

The Need for an Integrated Diversity Curriculum for Neurology Residency

Nicole Rosendale, MD, UCSF; S. Andrew Josephson, MD, UCSF

Area(s) abstract covers: GME

Domain(s) addressed:
- Cultural Competence
- Curricular Innovation
- Diversity
- Residency

Category: Curriculum Development

Abstract:
Objective: Providing culturally congruent care to an increasingly multicultural population is essential, and requires a diverse workforce as well as formal resident training on culturally-responsive care. We sought to understand the current prevalence and need for this type of training within neurology programs and to pilot an integrated curriculum locally. / Methods: We surveyed via email all program directors of academic neurology programs nationally regarding the prevalence of and need for formal cultural responsiveness training. We then developed locally an integrated diversity curriculum as a proof of concept, including a before and after survey of learners. The curriculum consisted of six one-hour lectures scheduled throughout the pre-existing resident didactics and was designed to address diversity issues of the local community. / Results: Forty-seven program directors (36%) responded to the survey. The majority of respondents did not have a formalized diversity curriculum in their program (65%), but most (85%) felt that training in cultural responsiveness was important. Assessment of residents after completion of the local diversity curriculum showed significant improvement in a number of abilities, including understanding of the role of implicit bias in medical decisions (3.08 vs 3.68, p = 0.01) and in comfort in apologizing for cross-cultural errors (3.375 vs 3.8, p = 0.048). / Discussion: There is an unmet need for cultural responsiveness training within neurology residencies, and integrating this curriculum is both feasible and efficacious. In order to address this need, we plan on creating a series of compiled lectures which can be shared with other institutions and adapted to address cultural issues of the local community, disseminating this curriculum to both academic and community organizations nationwide. / Reflective critique: A component of the post-curriculum survey asked the residents for feedback on the curriculum. Based on that feedback, the curriculum has expanded to include a variety of new topics during this academic year.
Abstract ID: 11

**Baseline Measures of Interdisciplinary Pediatric Learners’ Transgender-Related Knowledge and Clinical Self-Efficacy**

Stanley Vance, Jr, MD, UCSF; Elizabeth Ozer, PhD, UCSF; Sara Buckelew, MD, UCSF

**Area(s) abstract covers:** Medical Student Education (UME); GME

**Domain(s) addressed:**
- Evaluation of Programs
- Research
- Residency

**Category:** Curriculum Evaluation/Educational Research

**Abstract:**

**Purpose:** To explore pediatric learners’ baseline objective transgender-related knowledge and perceived self-efficacy in evaluating and counseling transgender youth.

**Background:** Previously, our Transgender Youth Curriculum demonstrated improvement in learner self-perceived knowledge (Vance et al, JAH 2017). Objective transgender-related knowledge and self-efficacy in providing care to transgender youth were not evaluated. Evaluation of these additional domains at baseline may aid in formulating future educational interventions.

**Methods:** 4th year medical students, pediatric interns, psychiatry interns, and nurse practitioner trainees were administered an evaluation on the 1st day of their adolescent medicine block. The evaluation assessed demographics, objective knowledge of medical and psychological considerations for transgender youth, and transgender-related clinical self-efficacy.

**Results/Evaluation Plan:** 13 learners have provided baseline evaluations (100% response rate). With 9 knowledge questions, learners’ median correct percentage was 22%. Using a self-efficacy scale of 0=not at all confident to 10=completely confident, learners reported low median self-efficacy scores in evaluating transgender youth in areas including: gender history-3; pubertal history-4; psychosocial assessment-4; sexual history-4; Tanner staging-4. Learners reported low median self-efficacy scores in counseling in the following areas: tucking practices-1; chest binding-1; and transgender medications-2.

**Discussion/Dissemination:** Preliminary data suggest that learners have low baseline objective transgender-related knowledge and low self-efficacy in the evaluation and counseling of transgender youth. We expect learners to improve in these domains after exposure to educational interventions, including our previously developed Transgender Youth Curriculum. A manuscript will be submitted for publication after further data collection.

**Reflective Critique:** This project is based on feedback provided at the 2016 UCSF Education Showcase and from reviewers of our JAH publication.
Abstract ID: 16

**Incorporating Transgender Health into Problem Based Learning. A Case Study and Evaluation at the Joint Medical Program**

Tara Gonzalez, MS, UCSF; Alexis Hoffkling, MS, UCSF; Elizabeth Johns, MS, UCSF; Amy Garlin, MD, UCSF, UC Berkeley

**Area(s) abstract covers:** Medical Student Education (UME)

**Category:** Curriculum Development

**Domain(s) addressed:**
- Cultural Competence
- Curricular Innovation
- Diversity
- Inquiry

**Abstract:**

*Purpose:* This work aimed to incorporate transgender health concepts into the UCB-UCSF Joint Medical Program Curriculum. Learning outcomes were evaluated through an open response essay.

*Background:* A 2011 survey of 175 Deans of Medical Education found 25% of Deans rated their LGBT curriculum as “poor” or “very poor”. Only 30.3% of schools discussed transgender hormone regimens, and 34.8% discussed gender affirmation surgery (Obedin-Maliver2011). In a 2011 survey of 6,000 transgender people, 50% reported needing to teach their medical providers about transgender care. (National Center for Transgender Equality 2011).

*Methods:* Three students and one faculty member redesigned the identity of an existing PBL case to include multiple transgender health inquiry paths. An open-ended essay question during the closed unit exam was coded for themes to evaluate the breadth of topics explored.

*Results/Evaluation Plan:*


*Discussion/Dissemination:* This curriculum update and the resulting learning outcomes articulated in the essays provide evidence that PBL is an excellent forum for the exploration and learning of gender as it relates to health, and gender affirmation. A manuscript is underway to more widely disseminate the experiences from this project.

Abstract ID: 25

**Development of Expert HIV Consultation Skills through Interprofessional Training for Early Career Professionals**

Erin Lutes, MS, RN, PHN, CNS, UCSF Department of Family and Community Medicine; Carolyn Chu, MD, MSc, UCSF Department of Family and Community Medicine; Marliese Warren, MS, UCSF Department of Family and Community Medicine; Brenda Goldhammer, MPH, UCSF Department of Family and Community Medicine

**Area(s) abstract covers**: CME

**Domain(s) addressed**:
Curricular Innovation
Feedback
Interprofessional Education
Consultation

**Category**: Curriculum Development

**Abstract**:
Purpose: The goal of the Clinician Consultation Center (CCC) training program is to prepare early career professionals (ECPs) entering the HIV workforce to deliver team-based care in the Patient Centered Medical Home. This is achieved through training ECPs to gain expert knowledge of evidence-based HIV prevention interventions.  

Background: The CCC provides free, nationwide telephone HIV consultation. It is a cost-effective, highly-utilized resource that helps meet a system-level need for widespread HIV expertise.

Methods: A new training program for ECPs was started by the CCC in 2013 to better develop a multidisciplinary HIV workforce. Student professionals in the UCSF Schools of Nursing and Pharmacy HIV specialty tracks are recruited and trained to become CCC consultants. Interdisciplinary trainers (advanced practice nurses, physicians, pharmacists) utilize multiple teaching methods over approximately 100 hours of training. Trainees complete a pre/post-training 17-item, 5-point Likert-scale survey, test case narrative, and qualitative feedback. CCC leadership meets weekly to assess trainee progress and revise curriculum as needed.

Results: Surveyed trainees report consistent, significant increases in HIV-related knowledge, skills, and behaviors after CCC training. Trainees felt they learned how to “assess a colleague’s information level/need” and provide the “right amount of [information]”. One trainee noted: “it was a very robust and helpful training”.

Discussion: The CCC has established an effective, novel model to train ECPs to deliver multidisciplinary HIV prevention education and consultation. The CCC plans to present results widely, with abstract submissions, talks, and posters, specifically aimed at HIV education, workforce development, and interdisciplinary education.

Reflective Critique: Input from trainees and CCC staff creates a continuous feedback loop, providing opportunities to improve and implement timely programmatic changes.
Defining Grit in Pharmacy Learners and Predictive Value for Academic Performance

Katherine Gruenberg, PharmD, UCSF; Tina Brock, Rph, MS, EdD, Monash University; Jaekyu Shin, PharmD, UCSF; Kimilia Kent, PharmD, ; David Tabari, PharmD, ; Conan MacDougall, MAS, PharmD, UCSF

Area(s) abstract covers: Pharmacy Student Education

Domain(s) addressed:
Assessment and Testing
Motivation

Category: Curriculum Evaluation/Educational Research

Abstract:

Purpose: To measure Grit in UCSF pharmacy students and determine the relationship between Grit and pharmacy school grade point average (GPA) to identify students who may benefit from academic assistance. / / Background: Grit, defined as sustained interest and effort, is a construct associated with academic achievement, independent of talent or cognition (Duckworth, 2009). Compared to other personality traits, Grit displays greater emphasis on endurance. In healthcare education, Grit is associated with higher grades in medical and pharmacy students, as well as less burnout in surgical residents (Fillmore, 2015; Salles, 2014; Harrell, 2016). Defining Grit in our students may offer insight into student success and also provide an approach to academic improvement. / / Methods: In 2016-17, UCSF pharmacy students voluntarily participating by taking the validated Short Grit Scale (Grit-S) via Qualtrics. The Grit-S is an 8 item survey that produces a score ranging from 1 (low Grit) to 5 (high Grit). Responses were linked to each UCSF student ID to measure the association between Grit score and pharmacy GPA. A multivariate correlation between GPA, Grit scores, and the following covariates was then conducted: standardized exam scores, pre-pharmacy GPA, age, gender, ethnicity, unrepresented minority, and first generation to college status. / / Results: Of the 508 eligible students, 89% (n=451) completed the survey. The cohort mean (± SD) Grit score was 3.69 (±0.45). There was not a significant correlation between Grit score and pharmacy GPA (rsquared<0.1). In multivariate analysis, the strongest predictor of pharmacy GPA was undergraduate GPA (p<0.001). / / Discussion: Grit scores were similar to those previously reported of medical and pharmacy students. We did not detect a significant association between Grit and pharmacy GPA. / / Reflective Critique: We received feedback at ESCape, which greatly helped to improve our abstract.
Early Medical Students in Novel Health Systems Improvement Curriculum

Stephanie Soong, MPH¹; Allison Ishizaki, MPH¹; Christina Cicoletti, MNA¹; Kristin Casey, MA¹; Patricia Ramirez, MPA¹; Meg McNamara, MD²; Rachael Lucatorto, MD³; Shannon Fogh, MD⁴; Edgar Pierluissi, MD⁵; Stephanie Rennke, MD⁶; Niraj Sehgal, MD⁶; Lei Choi, MD⁶, Anna Chang, MD⁶

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Area(s) abstract covers: Medical Student Education (UME)

Domain(s) addressed:
Curricular Innovation
Health Systems
Interprofessional Education
Quality Improvement

Category: Curriculum Development

Abstract:
Purpose: The curriculum embeds first year medical students in clinical microsystems with authentic roles in systems improvement efforts during early formative years. / Background: Recent education reforms aim to equip physicians with health systems skills and knowledge to improve health of patients and communities and prepare physicians to work in inter-professional teams to address safety, quality, waste, and equity. / Methods: The UCSF Clinical Microsystems Clerkship (CMC) allows first year medical students to engage in a 31-week integrated curriculum on systems quality improvement skills. Students are assigned to faculty coaches. Quality improvement principles are explored via large and small groups. A one-week immersion in the health system is followed by work with coaches and inter-professional teams to advance institutional or clinical microsystem priority quality initiatives a half day per week. / Results: All 153 first year students participated in 82 health systems improvement efforts. After four months, students contributed to quality improvement initiatives aligned with institutional goals and completed sections 1-4 of a modified Lean A3 template. Examples include: medication reconciliation, smoking cessation, opioid management, antibiotic stewardship, and diabetes management. / Discussion: The curriculum highlights systems science and provides MS1s with authentic roles and dedicated time for skills application to institutionally important quality initiatives. It also expands the scope of early learning to include multiple specialties. Preliminary analysis demonstrates active student engagement and new knowledge and skills that may lead to improved patient outcomes. / Reflective Critique / Faculty, students, and curriculum leaders continue to provide feedback on factors that facilitate and impede learning systems improvement in the CMCs to guide our ongoing development efforts.
Interprofessional student co-management of skilled nursing facility patients

Laura Byerly, MD, University of California, San Francisco; Leslie Floren, PharmD, University of California, San Francisco; Bridget O'Brien, PhD, University of California, San Francisco; Michi Yukawa, MD, University of California, San Francisco

Abstract ID: 27

Interprofessional student co-management of skilled nursing facility patients

Laura Byerly, MD, University of California, San Francisco; Leslie Floren, PharmD, University of California, San Francisco; Bridget O'Brien, PhD, University of California, San Francisco; Michi Yukawa, MD, University of California, San Francisco

Area(s) abstract covers: Medical Student Education (UME)

Domain(s) addressed:
Curricular Innovation
Interprofessional Education
Patient Care

Category: Curriculum Development

Abstract:
Purpose: To design and implement an interprofessional (IP) elective in which medical (MD), pharmacy (PH) and physical therapy (PT) students co-manage a panel of skilled nursing facility (SNF) patients. / Background: IP clinical care is ideally learned in authentic environments; however, there is a lack of authentic clinical IP education locally in which student teams can co-manage patients. / Methods: We designed a two week elective to engage students in clinical activities at the SFVA Community Living Center (CLC), a SNF run by IP teams. Interprofessional student teams model CLC faculty by providing team evaluations and treatment plans of 6-8 CLC residents. Patient care activities include: evaluating functional status/fall risk, conducting medication reviews, and presenting their recommendations at CLC team meetings. CLC faculty provide preceptorship. Assessment tools include 360-degree individual and team assessments and reflections on the IP team experience. / Results: Twenty-three students (11 MD, 11 PH, 2 PT) enrolled in the 2016-17 pilot. Preliminary student feedback (n=10) suggests the elective fills important gaps in IP education by providing an experience in which students feel they make valuable contributions to clinical care and are integral to the CLC team. Students appreciated the unique opportunity to manage patients as an IP team and experience first-hand how IP care impacts patients; CLC faculty/staff feedback also indicate students added value and efficiency to patient care. Students faced role uncertainty in unfamiliar activities and differences in learning goals. / Dissemination: The elective showcases the feasibility and potential of engaging IP learners in co-management. Design and implementation results have been submitted to the 2017 American Geriatrics Society and Society for General Internal Medicine Meetings. / Reflective Critique: Student feedback led to incorporation of patient follow-up rounds, IP clinical care outside of the CLC, and reduced structure of activities to allow for tailored individual learning goals.
Abstract ID: 30

**New team model improves interprofessional education for internal medicine residents**

Neil Zhang, MS, UCSF; G. Michael Harper, MD, UCSF; Kathryn Eubank, MD, UCSF; Michi Yukawa, MD, MPH, UCSF; Bridget O’Brien, PhD, UCSF; Daphne Lo, MD, UCSF

**Area(s) abstract covers**: GME

**Domain(s) addressed**: Curricular Innovation, Evaluation of Programs, Interprofessional Education, Residency

**Category**: Curriculum Evaluation/Educational Research

**Abstract**: Background/Purpose: Internal Medicine (IM) residents have limited opportunities to meet interprofessional (IP) teamwork milestones in the hospital. Faculty at SFVAMC designed and implemented the inpatient Interprofessional Patient Aligned Care Team (iPACT) to provide work-based IP education for IM residents. This evaluation examines how and to what extent iPACT provides opportunities for IM residents to learn and demonstrate IP milestones.  

**Methods**: Direct observations of one iPACT team and semi-structured interviews with team members generated evaluation data. Two investigators coded field notes and interview transcripts, then reviewed and reconciled discrepancies. IP milestones and iPACT learning objectives guided the framework for data analysis.

**Results**: 16 observations and 12 interviews were conducted (3 residents, 6 faculty, and the “Core team” of a pharmacist, nurse case coordinator, and social worker). Many interviewees noted IP milestones were better met on iPACT than on traditional IM teams. Data analysis showed iPACT provided numerous opportunities for residents to work toward IP milestones in four main areas: 1. Feedback: Residents gave and received real-time feedback with IP team regarding communication skills and patient care. 2. Communication: Residents communicated plans of care to the IP team in formal and informal settings. 3. Patient Care: Residents modified patient care plans utilizing IP team input. 4. System-based Practice: Residents learned IP team roles through collaboration and increased exposure to the IP team.

**Discussion/Dissemination**: iPACT’s model led to real-time interactions and increased exposure to IP team members, generating opportunities for IM residents to meet IP milestones. These results have been accepted for publication in JGME’s “New Ideas” and will be submitted to regional and national conferences.

**Reflective Critique**: In-depth program evaluation and analysis generated data regarding successful and replicable features of iPACT, which will be used for continued refinement of iPACT and the creation of additional teams.
Abstract ID: 36


Sirisha Narayana, MD, Division of Hospital Medicine, Department of Medicine, UCSF; Alvin Rajkomar, MD, Division of Hospital Medicine, Department of Medicine, UCSF; James Harrison, PhD, MPH, Division of Hospital Medicine, Department of Medicine, UCSF; Victoria Valencia, MPH, Department of Medicine, Dell Medical School, University of Texas, Austin, TX; Gurpreet Dhaliwal, MD, Medical Service, San Francisco VA Medical Center, San Francisco, CA; Sumant Ranji, MD, Division of Hospital Medicine, Zuckerberg San Francisco General Hospital, San Francisco, CA

Area(s) abstract covers: GME

Domain(s) addressed:
Curricular Innovation
Feedback
Reflection
Residency

Category: Curriculum Evaluation/Educational Research

Abstract:
Purpose: Describe an educational intervention facilitating informed self-assessment through structured post-discharge follow-up of patients’ longitudinal clinical courses. / Background: Informed self-assessment is a skill that requires examining data about performance from multiple perspectives. Following patients’ clinical courses after discharge is an excellent opportunity to develop this skill. Barriers to this practice include time constraints, discontinuous training environments, and difficulty accessing patient information. / Methods: Internal medicine interns on a four-week rotation received lists of hospitalized patients they cared for earlier in the year. They reviewed records of selected patients using a worksheet designed to guide reflection on clinical care. In faculty-led debrief sessions interns discussed what they learned. We reviewed worksheets and session transcripts to describe what learning occurred. / Results: All eligible interns (n=62) participated in this intervention. In 293 reflection worksheets and six debrief session transcripts, interns reported that post-discharge patient follow-up was valuable for their professional development, and helped them understand the natural history of disease and patients’ illness experiences. After reviewing their patients’ clinical courses, interns advocated for earlier end-of-life counseling and improved care transitions. They identified ways to adjust their clinical decision-making for similar patients in the future. / Discussion: Our intervention created the time, space and structure to facilitate informed self-assessment for interns. We anticipate that their reflections and insights may lead to better care for future patients. We plan to incorporate this program into other intern and resident rotations, and into GME patient tracking dashboards. / Reflective Critique: We obtained feedback from experts on clinical reasoning and qualitative research. We consulted with ESCape, which facilitated theory conceptualization. We presented at a national meeting and have submitted for peer-review.
Abstract ID: 42

**Uncharted Territory: A post-graduate residency curriculum for Psychiatric Mental Health Nurse Practitioners (PMHNP)**

Rosalind de Lisser, MSN, UCSF; Bridget O'Brien, PhD, UCSF; Tierney Matt, MSN, UCSF; Borden Sherri, MSN, UCSF; Sinuk Paul, MSN, VA; Primich Charles, MSN, VA

**Area(s) abstract covers:** Post-graduate nursing education

**Domain(s) addressed:**
- Curricular Innovation
- Longitudinal Educational Activities
- Residency

**Category:** Curriculum Development

**Abstract:**

Purpose: To develop a one year workplace-based curricular framework for a PMHNP residency.  

Background: The Institute of Medicine called for improvements in advanced practice nursing education that support readiness for full scope of practice. Yearlong post-graduate NP residencies offer one solution. However, current programs lack a guiding curricular framework and instead rely on locally developed, ad-hoc curricula.

Methods: The PMHNP residency, based at the SFVA, provides a 3rd year of supervised clinical practice and parallel didactic experiences that build on trainees first 2 years of clinical training. Using Kern’s six steps to curriculum development, we conducted a needs assessment to guide development of a curricular framework. Four anchor themes critical to development of holistic PMHNPs were identified: PMHNP Role Development, Interprofessional Collaboration, Systems Improvement and Leadership, and Self-reflective Practice. Specific, developmentally-appropriate learning objectives for each anchor theme are addressed in quarterly units. An evaluation plan was developed to examine residents’ progress in the program as well as program impact.

Results/ Evaluation: The new curriculum launched with 3 residents in July 2016. Implementation and program evaluation is currently underway. Program evaluation includes evaluation of the of resident experiences and aligns with the programs goals of improving readiness for independent clinical practice, building a culture of near peer teaching, increasing the interprofessional team of trainees and faculty at the SFVA, impacting the culture of nursing scholarship, and empowering preceptors to become leaders in clinical teaching.

Discussion/ Dissemination: We created a curricular framework that other residencies can build on in their local context. We plan to submit the framework for publication in the Journal of Nursing Education.

Reflective Critique: The Teaching Scholars Program provided significant guidance and feedback to support robust development of this curricular framework.
Impact of Charge Data on First-Year Medical Student Decision-Making: Teaching High Value Care to Early Learners

Clarice Nguyen, BA, UCSF Medical Student; Maxwell Hong, BS, UCSF OME Program Representative; Dana Rohde, PhD, UCSF Departments of Anatomy and Physiology; Leslie Zimmerman, MD, UCSF Department of Pulmonary and Critical Care; Ari Hoffman, MD, UCSF Department of Medicine

Area(s) abstract covers: Medical Student Education (UME)

Domain(s) addressed:
Curricular Innovation
Health Care
Health Systems

Category: Curriculum Development

Abstract:
Purpose: To investigate whether passive exposure to charge information would improve appropriateness and decrease costs associated with hypothetical ordering behavior of medical students. / / Background: Prior studies that exposed physicians to charge information or implemented a feedback component have shown variable results. To our knowledge, no studies have examined the effect of exposure to charge data on first-year students. / / Methods: A two-session activity was piloted for all UCSF first-year medical students. 153 students in 48 groups were given patient cases which involved ordering diagnostic tests. Groups were randomized to receive charge data or no data. Tests were pre-assigned to three appropriateness categories. Rates of ordering tests in intervention and control groups were compared. Data was shared in an interactive lecture and students self-reported the effect of charge data on their ordering. / / Results: There were no significant differences in rates of ordering indicated and wasteful tests in two cases. In Case 3, there was a marginally significant increase in the rate of ordering indicated tests (p=0.05) and significant decrease in the rate of ordering wasteful tests (p=0.03). In Case 4, there was a significant decrease in the rate of ordering indicated tests (p=0.02). There were no significant differences in the total fees generated (p=0.43). In the course evaluation, 96.4% of respondents reported being influenced by price information. / / Discussion: Exposure to charge data showed modest and variable effects on ordering behavior of first-year students, although they report being influenced by this information. We plan to publish our results in a medical educational journal and submit abstracts to education conferences. / / Reflective Critique: We worked with course directors and solicited feedback from other faculty in the Division of Hospital Medicine regarding future iterations in the context of the Bridges curriculum. This activity may be modified and incorporated into a more extensive curriculum on costs and high value care.
Improving interprofessional team communication, patient care and safety in a primary care clinic through a longitudinal quality improvement initiative

Anyia Desai, UCSF; Emilio Galan, MPH; Kessy Gbenedio; Daniel Herrador, MPH; Disney Le; Pooja Shah; Lindsay Mazotti, MD, UCSF; Nardine, Riegels, MD, UCSF

Area(s) abstract covers: UME

Domain(s) addressed:
Communication
Quality Improvement

Category: Curriculum Development

Abstract:
Purpose: To improve communication between physicians and medical assistants (MAs) and clinic efficiency in a primary care setting through implementation of a communication checklist. Background: Literature review demonstrates that effective MA and physician teams are vital to distribution of clinical responsibilities and delivery of cost effective, efficient, and high quality patient care, but site visits revealed physician/MA pairs set aside time for team communication only 15% of the time. Students participating in the 2015-2016 UCSF-Kaiser Longitudinal Integrated Clerkship developed and implemented a quality improvement initiative to improve communication between physicians and medical assistants (MAs) in a primary care clinic at Kaiser Oakland.

Methods: Students used feedback from focus groups and rapid cycles of change to develop a novel checklist for daily communication between physicians and MAs which they called the “Hi-5 Huddle.” The final checklist included five questions, could be completed in five minutes or less, and addressed daily workflow, patient visits, and performance feedback.

Evaluation: Two months after implementation of the Hi-5 huddle, huddling rate had increased from 15% to 87%. The percentage of MAs and physicians who agreed or strongly agreed that they were satisfied with team communication increased from 59% to 100%, that huddling helped them prepare for the day increased from 53% to 100%, and that huddling improved patient care increased from 59% to 100%.

Dissemination: The tool received administrative leadership support and will be implemented in other clinics in the medical center.

Reflective critique: Students were successful in developing and implementing an interprofessional communication tool in a primary care clinic. Use of the tool led to improvement in workplace communication and care delivery. Students acquired practical experience in interprofessional collaboration and quality improvement skills.
Abstract ID: 5

**The Effect of Emotions and Participant Role on Simulation Learning**

Timothy Rogers, MD, UCSF; Sandrijn vanSchaik, MD, UCSF

**Area(s) abstract covers:** GME

**Domain(s) addressed:**
- Residency
- Simulation
- Emotions

**Category:** Curriculum Evaluation/Educational Research

**Abstract:**
Purpose: We undertook the current study to explore the difference in learning between active participants and vicarious learners in the context of emotion. / Background: Learning through active participation is thought to be one of the main benefits of simulation-based education, yet recent literature has started to challenge this assumption. Studies have shown that observers may even learn better than active participants. This so called “vicarious learning” may be explained by emotional condition, since the emotional state of the learner has been shown to impact their interpretation of data and memory of important events. Improved understanding in this area could lead to optimized simulation design. / Methods: Pediatric interns participated in 6 simulation scenarios over 2 sessions 5 months apart as part of their standard curriculum. Each intern served as an active participant (defined as having a specific role in the scenario), with other interns observing guided by an observation tool (vicarious learners). After each simulation scenario, all interns completed a validated tool to assess emotional state, the Positive and Negative Affect Schedule or PANAS. Five months after each session, we assessed knowledge retention by asking interns to complete a multiple-choice test with items related to each scenario. We compared PANAS scores and test results between active and vicarious learners using repeated measures ANOVA with role in the scenario and session number as within-subjects factors. / Results: 26 of 28 eligible interns participated. Interns scored higher on both components of the PANAS when they were in an active role compared to when they were observing. Interns had similar scores on knowledge test items related to the scenario they actively participated as on items related to scenarios they observed. / Discussion: In our study, active participation in simulation led to similar knowledge retention compared to vicarious learning despite a higher negative emotional response. / Reflective Critique: It is ongoing via work in progress and SOC meetings.
Abstract ID: 13

**Aha! Moments: Breakthroughs in learning lumbar punctures and implications for instruction**

Shruti Kant, MD, University of California San Francisco; Ellen Laves, MD, University of California San Francisco

**Area(s) abstract covers:** GME

**Domain(s) addressed:**
Clinical Instruction and Performance
Research
Residency

**Category:** Curriculum Evaluation/Educational Research

**Abstract:**

Purpose: Analyze schema formed during LP “aha! moments” and describe the characteristics and critical concepts understood in these moments. / Background: Pediatric residents have difficulty meeting competency standards for lumbar punctures (LPs) despite attempts to supplement clinical experience with simulation-based education. This deficiency may be related to instruction emphasizing behavioral steps over development of cognitive schema. There is a need for instruction that supports rapid skill acquisition by scaffolding learner integration of concepts. In this study we explore LP “aha! moments,” defined as sudden and significant improvement in performance associated with schema formation, as a potentially rich source of information to guide procedural instructional design. / Methods/Design: We surveyed LP Subject Matter Experts (SMEs) from UCSF neonatology and pediatric emergency medicine to identify those who experienced an LP learning “aha! moment”. We conducted semi-structured interviews exploring these moments, then coded and analyzed interview transcripts using a general inductive approach to identify themes. UCSF institutional review board approved the study as exempt. / Results: Of 24 surveyed SMEs, 11 recalled an “aha! moment”. Common characteristics of these “aha! moments” included the new ability to mentally visualize anatomic structures, and integrate critical concepts and contextual cues. Specifically, SMEs described integration of patient-related concepts (positioning and anatomy) and performer-related concepts (needle angulation and anchoring). / Conclusions: We successfully deconstructed SME schemas developed during LP “aha! moments”. Targeting the identified characteristics and concepts during bedside and simulation-based instruction can potentially provide residents a more efficient path to LP competency than current methods. / Reflective Critique: TSP instructors and mentors reviewed this study and provided feedback that informed study design, interviews and abstract writing. /
Lessons of a Pilot: Inpatient Hospital Medicine Microsystem Teaches Systems-Based Practice and Clinical Skills to Medical Students

Lynnea Mills, MD, UCSF; Ari Hoffman, MD, UCSF; Steven Ludwin, MD, UCSF; Marwa Shoeb, MD, MS, UCSF; Adeena Khan, MD, UCSF; Cindy Lai, MD, UCSF

Area(s) abstract covers: Medical Student Education (UME)

Domain(s) addressed:
Curricular Innovation
Health Systems
Quality Improvement

Category: Curriculum Development

Abstract:
Purpose: Develop best practices for teaching systems-based practice (SBP) skills to pre-clinical students and for supporting junior faculty in curriculum development work / Background: SBP learning is gaining importance in medical training, but when and how best to present this material remains unclear. We aimed to investigate these questions via a pilot curriculum on SBP. / Methods: We developed a didactic and experiential curriculum to integrate SBP with clinical learning for the 12 first-year medical students assigned to Hospital Medicine for their 2015-16 preceptorship. Didactics covered basics of quality improvement (QI), high-value care, health information technology, and patient experience. Students then applied SBP skills to real QI projects for the experiential component. After each session, students completed anonymous surveys, and involved faculty participated in semi-structured curriculum evaluation. / Results: Response rates were 100%. Students reported facility with defining QI terms (mean 4.2 on 5-point Likert scale; SD 0.72) and describing factors driving healthcare costs (mean 3.8; SD 0.58). They felt they would apply content to future work (mean 4; SD 0.60) and that the course was relevant to their development (mean 4.3; SD 0.65). Qualitative analyses of student and faculty responses indicated students were most engaged in SBP content with direct relevance to patients, and that QI projects were most successful when discrete and concrete. Faculty feedback focused on logistics such as scheduling and curriculum development support. / Discussion: Dedicated systems curricula can effectively teach pre-clinical students SBP concepts and skills and enable them to engage in work that adds value to the clinical setting; this teaching is most effective when contextualized in clinical learning. Faculty feedback emphasized the importance of administrative support and medical school leadership. / Reflective critique: Student and faculty responses may guide future changes to clinical microsystem clerkships, and many have already been shared with the program leadership.
Integration of a Community Pharmacy Simulation Program into a Therapeutics Course

Jaekyu Shin, PharmD, UCSF School of Pharmacy; Daryush Tabatabai, BS, UCSF School of Pharmacy; Christy Boscardin, PhD, UCSF School of Medicine; Marcus Ferrone, PharmD, JD, UCSF School of Pharmacy; Tina Brock, EdD, Monash University, Australia

Area(s) abstract covers: Medical Student Education (UME)

Domain(s) addressed:
Curricular Innovation
Research
Simulation

Category: Curriculum Evaluation/Educational Research

Abstract:
Purpose / To demonstrate the feasibility of integrating the computer simulation MyDispense into a Therapeutics course and to measure the effects of this on student perception and learning. / Background / Computer simulation has many potential advantages over paper-based cases. It provides students with opportunities with targeted practice and immediate feedback. MyDispense is a computer program simulating community pharmacy practice which has been used in the first year pharmacy law course. However, this program has not been integrated into a Therapeutics course. / Methods / We conducted a prospective study with an experimental phase and an implementation phase. In the first phase, students were randomized to complete a therapeutics case using MyDispense or traditional paper methods in class. In the second phase, all students completed two therapeutic cases using MyDispense in class with the option to complete four additional outside-of-class cases using MyDispense. Students completed pre- and post-tests in class and three surveys. / Results / In the experimental phase, mean test scores increased from pre- to post-test for both MyDispense and traditional paper groups, but the difference between the groups was not statistically significant. Students in the traditional paper group reported statistically significant gains in confidence compared to the MyDispense group (p<0.001). In the implementation phase, mean test scores again increased, however, student perception of the use of MyDispense for Therapeutics was not positive. Completing the optional outside-of-class cases, however, was positively correlated with the midterm and final examination scores (Spearman correlation coefficient = 0.30; p<0.001) / Discussion / Implementation of MyDispense in Therapeutics may be feasible and has positive effects such as positive correlation with exam scores and capacity for immediate feedback. With short-term use and in the absence of assessment methods that also require seeking information from patients, students prefer to learn via traditional paper cases.
Simulation Training in the Treatment of Gynecological Malignancies with Brachytherapy

Lisa Singer, MD, PhD, UCSF; Adam Cunha, PhD, UCSF; Lee-may Chen, MD, UCSF; Shannon Fogh, MD, UCSF; Carly Hoffman, NP, UCSF; Steve Braunstein, MD, PhD, UCSF; Tracy Sherertz, MD, UCSF

Area(s) abstract covers: Medical Student Education (UME); GME

Domain(s) addressed:
Curricular Innovation
Interprofessional Education
Patient Care
Simulation

Category: Curriculum Development

Abstract:
Purpose: To address the decline in brachytherapy use in clinically appropriate cervical cancer patient populations in the U.S., this project aims to develop a gynecological brachytherapy simulation training program. Background: Brachytherapy, or internal radiation therapy, is used in combination with external beam radiation therapy and chemotherapy as curative therapy for locally advanced cervical cancer. Reviews of practice patterns in the U.S. have identified a decrease in appropriate brachytherapy use, associated with a decrease in overall survival. Brachytherapy is a technically challenging procedure and cervical cancer case volume varies across U.S. hospitals. Currently, U.S. residents are not required to train in a minimum number of gynecological brachytherapy cases. By utilizing a non-clinical environment, simulation can address the need for improved gynecological brachytherapy training. Methods: A brachytherapy simulation program is being developed, consisting of a physical simulator for practice in physical exam and procedural skills, as well as an online module rooted in articulate storyline to teach staging and disease management. The learners are radiation oncology residents and gynecological oncology trainees. Curricular objectives are to increase trainee confidence and interest in practicing gynecological brachytherapy. Evaluation Plan: The target implementation date for this program at UCSF is in the Spring of 2017. With Institutional Review Board approval, pre- and post-test surveys were developed to assess change in trainee confidence and interest following completion of the simulation program. Dissemination: If successful, this simulation training program can be disseminated to other training programs in the United States, as well as to other countries with a higher prevalence of cervical cancer. Current work includes adapting the curriculum for medical student learning. Reflective Critique: Feedback from ESCape in 2016 helped focus the abstract content. Feedback from ESCape in 2015 and from the HPE Pathway assisted in curriculum development.
Abstract ID: 56

**The Status of Structured Robotic Curricula at General Surgery Residencies: Curricular Gaps and Future Needs**

Courtney Green, MD, UCSF; Hueylan Chern, MD, UCSF; Patricia O'Sullivan, EdD, UCSF

**Area(s) abstract covers:** GME

**Domain(s) addressed:**
Curricular Innovation

**Category:** Curriculum Development

**Abstract:**

Purpose: This study is an analysis of robotic curricula instituted in general surgery residencies to determine their curricular organization, cognitive content and psychomotor skills.

Background: With increasing robotic use in surgical practice, educators have needed to create curricula for trainees. Current curricula developed by industry are designed for expert surgeons.

Methods: Through reviewing the literature (MedEd Portal and PubMed) and collaboration with Intuitive Surgical and the online DaVinci community, we identified 12 residency programs with robotic curricula. We developed a structured coding form for analysis. This included identifying themes within the curricula such as sequence, duration, emphasis and assessment, generating a descriptive summary of the data.

Results: Evaluation of 12 programs revealed similar structure: learners started with 1) online modules (created by Intuitive Surgical [IS] providing a basic overview of technology and function of the robot), 2) simulation exercises (created by IS on the robotic console to provide practice with the various robotic technical capabilities), 3) bedside experience during R2-R3 training years (first surgical exposure to the robot), and 4) actual operative opportunities on the console in the final years of training. The standardized portions (online modules and simulation exercises) were a device dependent training paradigm; they defined the sequence of instruction. Nearly all curricula lacked specifics on duration and content of training activities and assessment. None clearly described cognitive or psychomotor skills needed by residents and none required a proficiency assessment prior to graduation.

Discussion: Despite the intent to create resident specific curricula, curricula remain grounded in initial industrial efforts to train experienced surgeons. This analysis highlighted two concerns. First, curricula are non-specific with regards to type, amount and nature of hands on experience. Second, they lack discussion of operative technique and surgical concepts.
Abstract ID: 57

**Technical skill improvement with surgical preparatory courses: what advantages are reflected in residency?**

Courtney Green, MD, UCSF; Emily Huang, MD, MA in Ed, UCSF; Nina Zhao, MD, UCSF; Patricia O'Sullivan, EdD, UCSF; Edward Kim, MD, UCSF; Hueylan Chern, MD, UCSF

**Area(s) abstract covers:** Medical Student Education (UME); GME

**Domain(s) addressed:**
- Curricular Innovation
- Research
- Skills Performance

**Category:** Curriculum Evaluation/Educational Research

**Abstract:**
Purpose: This study assessed technical skill performance of Graduating Medical Students (GMS) before (T1) and after a preparatory course (T2) and then again 2 (T3) and 4 (T4) months later as surgical residents, with comparison to surgical interns without such a course. 

Background: GMS often participate in courses to facilitate transition from medical school to residency. However, the sustainability and benefits of this skill acquisition once in residency remains uncertain.

Method: In April 2016, GMS took the preparatory course. In July-August the GMS completed the basic skills curriculum as interns, with their surgical peers. Both courses included a home video curriculum and the same four technical exercises at the start and conclusion of the course. 3 surgeons scored the video exercises and we calculated average reviewers’ scores across the four tasks. Overall scores were examined for GMS across the 4 time-points. Course naive (control) interns were compared to these GMS at T3 and T4.

Results: Seven of 16 GMS enrolled in the preparatory course matched to our institution, and 41 residents completed the intern basic skills curriculum. Of these interns, 32 completed all pre/post course assessments (T3 and T4), and the 7 GMS-interns completed assessments at all 4 time-points. GMS scores increased from 74.5%(T1) to 94.1%(T2)(p<0.001), and they maintained their performance in residency. Control interns also improved with a course (68.2%(T3) to 82.9%(T4), p<0.001). The GMS-interns scored higher at the start of residency compared to the control interns (T3, 89.08% vs 65.03%, p<0.001), with both groups achieving near the maximum score at the end of the curriculum.

Discussion: Our GMS show technical gains that accompany them into residency, erasing the gap seen in their control intern peers. Structured surgical preparatory courses provide matriculating interns with a head start on basic technical skills, while those without a preparatory course initially require a steeper learning curve, particularly if their programs lack a similar intern skills curriculum.
Evaluation of a pilot palliative care curriculum for radiation oncology residents

Michael Garcia, MD, MS, Dept. of Radiation Oncology, UCSF; Steve Braunstein, MD, PhD, Dept. of Radiation Oncology, UCSF; Wendy Anderson, MD, MS, Dept. of Medicine, Division of Hospital Medicine and Palliative Care Program, UCSF

Area(s) abstract covers: GME

Domain(s) addressed:
Communication
Curricular Innovation
Interprofessional Education
Residency

Category: Curriculum Evaluation/Educational Research

Abstract:
Purpose: To evaluate a pilot palliative care didactic curriculum for radiation oncology residents. / Background: At the 2016 UCSF Education Symposium we presented a needs assessment for a pilot palliative care curriculum within radiation oncology residency. Radiation oncologists play an important role in delivering primary palliative care, but there is a paucity of formal instruction and published studies on palliative curricula within radiation oncology residency. We created and implemented a pilot 1-week palliative care didactic curriculum based on ASCO-AAHPM palliative care domains. / Methods: Pre- and post-course surveys were distributed to all 13 radiation oncology residents to assess the pilot curriculum. Surveys evaluated comfort level in communication and palliative care on a scale from 1 to 6 (1= “very uncomfortable,” 2= “uncomfortable,” 3= “somewhat uncomfortable,” 4= “somewhat comfortable,” 5= “comfortable,” 6= “very comfortable”). Pre- and post-course comfort level means were compared using t-tests. / Results: Ten residents completed both the pre-and post course surveys. Comfort level rose in a statistically significant manner for multiple primary palliative care topics. Most notably, comfort significantly rose from a mean score <5 to a mean score ≥5 (became at least “comfortable”) for knowing how to intervene for uncontrolled pain, discussing the purpose of palliative treatments, and discussing the role of palliative care providers. / Discussion/Dissemination: A short didactic based curriculum is feasible and effective for integrating palliative education in radiation oncology residency. This work is currently in-progress in the International Journal of Radiation Oncology*Biology*Physics (10.1016/j.ijrobp.2017.01.011), in which we offer to share our curriculum with our colleague residency programs. / Reflective Critique: Feedback received at the 2016 UCSF Education Symposium was used for refinement and implementation of the pilot curriculum.
Abstract ID: 29

**Conducting a Needs Assessment for Palliative Oncologic Care in Underserved and Resource-Limited Populations**

Melody Xu, MD, Dept of Radiation Oncology; Mike Garcia, MD, Dept of Radiation Oncology; Chris Cheung, BS, School of Medicine; Susan Barbour, NP MSN/BSN, UCSF Medical Center; Ted Scheel, MSW/MPH, Helen Diller Comprehensive Cancer Center; Steve Braunstein, MD, PhD, Dept of Radiation Oncology; Marcia Glass, MD, Department of Medicine; Gerald, Hsu, MD, PhD, Department of Medicine; Tracy Sherertz, MD, Dept of Radiation Oncology

**Area(s) abstract covers:** Medical Student Education (UME); GME; CME

**Domain(s) addressed:**
- Community Medicine
- Curricular Innovation
- Global Health
- Interprofessional Education

**Category:** Curriculum Development

**Abstract:**

**Purpose:** Conduct a needs assessment for formal instruction on palliative oncologic care in underserved and resource-limited populations.

**Background:** Basic physician competency in palliative care is increasingly emphasized and incorporated into medical curriculum. However, many adaptations are required to address unique challenges in underserved and resource-limited populations. A needs assessment was conducted to examine curricula specifically addressing palliative oncologic care for this population.

**Methods:** A literature search was conducted to find peer-reviewed publications on palliative oncologic care education for resource-limited populations. We explored educational programs for UCSF oncology trainees and online resources on palliative care and global and rural health.

**Results/Evaluation Plan:** Formal education materials are not well-described in literature and not readily available for UCSF oncology trainees. Online education programs are high quality but rarely address the adaptations that may be required for underserved and resource-limited populations. Of the available materials describing palliative care among these populations, stories tend to be anecdotal and are difficult to generalize for other settings or cultures.

**Discussion/Dissemination:** We aim to develop an online curriculum to educate oncologists training or practicing in urban, rural, or global health settings. Curriculum would draw from UCSF experts in palliative care, oncology, global health, and medicine. Topics would include identifying at-risk populations, wound care, cost of care, and hospice access. Pre- and post-assessments will be used for iterative improvement and presentation/publication. The online portal can be used to educate trainees and learn from providers working in resource-limited areas.

**Reflective critique:** The project was submitted to the UCSF Innovations in Education Grant and we received advice for constructing evaluation plans and logistics of web hosting. We consulted the Clinical Learning Environment group from the UCSF Library and Educational Technology Services. After reviewer feedback and consultation with ESCape, we re-shaped the project to focus on a needs assessment.
Abstract ID: 10

Intensive Care Unit Educators: A Multicenter Evaluation of Residents’ Perceptions of Esteemed Attending Behaviors

Lekshmi Santhosh, M.D., UCSF; Anna Brady, M.D., University of Washington; Michelle Sharp, M.D., Johns Hopkins University; Graham Carlos, M.D., Indiana University

Area(s) abstract covers: GME

Domain(s) addressed:
- Faculty Development
- Mentoring
- Professionalism
- Residency

Category: Curriculum Evaluation/Educational Research

Abstract:
PURPOSE / Our multicenter study focused on identifying teaching behaviors of intensive care unit (ICU) physicians that learners observe in faculty they esteem as effective educators. / BACKGROUND / It is important for faculty to know what behaviors influence learner perception. Only two studies have been published addressing internal medicine residents’ perceptions of attendings, but these studies focused on general medicine faculty rather than ICU faculty. / METHODS / The study was conducted at IU, JHU, UCSF, and UW. Internal medicine residents completed an anonymous online survey rating the importance of behaviors of ICU attending role models. We created a 37-item-survey derived from prior studies and the Clinician Teaching Program from the Stanford Faculty Development Center. This questionnaire included behaviors, current and past, that residents observed in their ICU attendings. / RESULTS / 260 residents responded to the survey (overall response rate of 43%). The five behaviors most commonly rated as “very important” to residents were: 1) enjoyment of teaching; 2) demonstrating empathy and compassion to patients and families; 3) ability to explain clinical reasoning & differential diagnoses; 4) treating non-physician staff members respectfully; and 5) enthusiasm on rounds. Behaviors that trainees rated as less important were having numerous research publications, having served as a chief resident, sharing personal life with house staff, and organizing end-of-rotation social events. / DISCUSSION / Our study provides novel information to ICU faculty striving to influence resident education. While prior data demonstrated that learners valued attendings having served as a chief resident and sharing personal information with learners, our study did not replicate this. We discovered that faculty coaching and development could cultivate the behaviors that learners appreciate. / REFLECTIVE CRITIQUE / Our study was limited by lack of correlation to objective performance metrics and low response rate. Future work may include assessing the impact of faculty development on the behaviors.
Abstract ID: 15

**Content, Collaboration, and Community: Building Shared Faculty Development Across Local Hospitalist Groups - A 3-Site Junior Faculty Boot Camp**

Steven Ludwin, MD, UCSF Medical Center; Stephanie Rennke, MD, UCSF Medical Center; James Harrison, PhD, UCSF Medical Center; Lawrence Haber, MD, Zuckerberg San Francisco General Hospital; Susan Wlodarczyk, MD, San Francisco VA Medical Center; Bradley Sharpe, MD, UCSF Medical Center

**Area(s) abstract covers:** faculty development

**Domain(s) addressed:**
Faculty Development

**Category:** Curriculum Development

**Abstract:**
Purpose: To develop a "Faculty Boot Camp" to leverage resources and promote community for early career hospitalists. Background: Faculty development can help new faculty set professional goals, identify effective mentorship, and learn foundational skills. Previously, the Division of Hospital Medicine at UCSF Medical Center developed a Faculty Boot Camp with the goal of teaching content around career development. This year the program was enlarged to include two other hospitalist groups. Methods: A faculty development committee with representatives from Zuckerberg San Francisco General Hospital, San Francisco VA Medical Center and UCSF Medical Center developed a 3-site “Faculty Boot Camp”. This one-day event occurred in November 2016 and included fellows and junior faculty (2 years or less). The objectives of the boot camp were to 1) identify strategies for successful mentorship and career planning, 2) introduce key leaders in academic medicine, and 3) build a local community. Results: A total of 19 of the 21 (90%) participants completed an anonymous online survey. All sessions were rated between very good and excellent, with an average score of 4.4 on a 5 point Likert scale. The most popular sessions were "Optimizing Clinical Success and Reasoning" (4.8) and "Finding your Niche" (4.7). Participants strongly agreed that the faculty development session supported professional development (4.9), developed community (4.8) and promoted camaraderie (4.8). Survey respondents unanimously recommended the "Faculty Boot Camp" to future new faculty (19/19, 100%) and felt integrating different hospitalist groups added value to the experience (19/19, 100%). Discussion: The 3-Site Boot Camp is a model for inter-group faculty development to teach core concepts important to early career hospitalists. Co-sponsored faculty development amongst local groups can be an effective way to leverage resources, breakdown silos and foster collaboration. Reflective Critique: Based on survey feedback from leadership and faculty the 3-site Boot Camp will continue to be offered every year.
Abstract ID: 22

Reclaiming Float: An educational intervention promoting structured reflection and feedback through follow-up of overnight admissions

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Area(s) abstract covers: GME

Domain(s) addressed:
Feedback
Patient Care
Reflection
Residency

Category: Curriculum Development

Abstract:
Purpose: Design an educational intervention to facilitate structured reflection and feedback on admitted patients’ clinical courses during float rotations. / Background: Night admitting (“float”) rotations allow residents to engage in experiential learning by practicing independently. Most residents reported rarely receiving feedback from accepting teams on their overnight clinical management. Constraints of the rotation limit the opportunity for self-assessment and reflection. Members of our group previously established a model for structured reflection through patient follow-up for internal medicine interns. / Methods: Second and third year internal medicine residents on a four-week float rotation participate in this intervention. They review the record of at least four patients using a guided reflection worksheet on a secure online platform. They also contact four accepting providers (attendings or senior residents) for feedback on their clinical management. / Results/Evaluation Plan: Our evaluation plan includes: 1) post-intervention survey soliciting residents’ attitudes on patient follow-up, habits of follow-up, and perceived value of our intervention; 2) focus groups to assess barriers to follow-up and reflection; 3) qualitative analysis of reflection worksheets to determine patterns in residents’ clinical observations and questions. / Discussion/Dissemination: We developed a structure for residents on night admitting rotations to reflect on their practice and solicit feedback on their clinical management. We also hope to promote a culture within the residency program that supports habits of patient follow-up and solicitation of clinical feedback. We plan to present our curriculum and results at national meetings, disseminate our work through publication and collaborate with other institutions working to improve feedback on diagnostic reasoning in residency training. / Reflective Critique: Prior to implementing this intervention we solicited input from residency program leadership, including experts in resident evaluation and clinical reasoning.
Overnight Teaching of Medicine Residents: A Multi-Site Study Shows Room for Improvement

Sara Sani, M.D., SFVAMC/UCSF; Emily Wistar, M.D., ZSFGH/UCSF; Lien Le, M.D., UCSF

Area(s) abstract covers: GME

Domain(s) addressed:
Clinical Instruction and Performance
Health Care

Category: Curriculum Evaluation/Educational Research

Abstract:
Purpose: To understand the state of night teaching in an Internal Medicine training program and solicit the ideal format for overnight education. / Background: Duty hour restrictions for medical housestaff have led to the use of night float systems. While studies show this change has improved resident well-being, they also indicate that resident education has deteriorated on overnight rotations (Bolster & Rourke, 2015). / Methods: We administered a survey to all residents and hospitalists in the department of Internal Medicine at three UCSF hospital sites. Surveys were web-based and anonymous with a mix of qualitative questions and items on a Likert scale. Responses were analyzed on a descriptive basis. / Results: Of 186 residents surveyed, 42 (23%) responded. Of 198 hospitalists surveyed, 68 (34%) responded. Only 11% of residents and 24% of hospitalists reported satisfaction with the current amount of nighttime teaching. Despite this, 66% of residents reported wanting dedicated teaching and 78% of attendings wanted to provide dedicated teaching. Residents and attendings agreed that top barriers to nighttime teaching were clinical work, difficulty coordinating time with overnight providers and provider fatigue. Hospitalists and residents agreed the ideal teaching framework was a case-based talk, limited to 20 minutes, and delivered before 2 am. Lack of a formalized curriculum was not identified as a significant barrier to nighttime teaching by either group, however, 62% of hospitalists agreed that prepared teaching materials would increase the frequency of nighttime teaching. / Discussion/Dissemination: Our study suggests that residents and hospitalists are dissatisfied with the current amount of nighttime teaching. The ideal timing, format, and framework of teaching were agreed upon, however, there was ambivalence about the need for a formal night curriculum. / Reflective Critique: The survey content was reviewed by senior clinicians, educators, and current residents and was modified in a multiple-round PDSA cycle before disseminating.
Cytology Cases of the Week: Five Years of Data on an Educational Tool That Improves Trainee Exposure to Cytology

Nhu Thuy Can, MD, UCSF; Kristie White, MD, MAEd, UCSF; Sarah Calkins, MD, UCSF; Britt-Marie Ljung, MD, UCSF; Elham Khanafshar, MD, UCSF

Abstract ID: 1

Purpose: Assess the effectiveness of cytology cases of the week (COWs) as a teaching tool. 

Background: Cytology is a major subspecialty within pathology, and ACGME requires residents to examine 1,500 cytology specimens. COWs were instituted in 2011 to increase trainee exposure to cytology. 

Methods: Images of 2-5 cases/week with clinical information are sent to residents via email. Residents have one week to respond; after which, correct answers are emailed. Cytology resident in-service examination (RISE) scores were compared between participants and non-participants from 2011-2015. Additionally, an anonymous survey was distributed to trainees using Qualtrics Survey Software to assess perception of COWs as a teaching tool. 

Results: An unpaired two-sided t-test showed participants in COWs scored 15.4% higher on the RISE than residents who participated minimally or not at all (p<0.05). Analysis of years separately showed participants, on average, had higher RISE scores than non-participants, which was statistically significant in 3 of 5 years (p<0.05). In 2016, COWs were not sent. An unpaired t-test comparing RISE scores for participants in 2011-2015 (n=68) to that of all residents in 2016 (n=31), showed a 14.4% decrease in the RISE scores in 2016 (p<0.05). There was no correlation between percentage of correctly submitted answers for COWs and RISE scores. The survey response rate was 45.6% (26/57 trainees). The vast majority (83%) reported participating in COWs for self-study, while 17% reported participating for board preparation. The majority (86%) felt COWs increased their cytology knowledge. Major reasons for not participating included technical challenges and time limitations. 

Discussion: Residents who participate in COWs perform higher on the RISE, and simply participating in COWs is associated with higher RISE scores, regardless of percentage of correctly submitted answers. 

Reflective Critique: COWs are an effective educational tool. Modifications to overcome technical challenges and encourage resident participation should be explored.
Medical students editing Wikipedia: course improvements over four years

Amin Azzam, MD, MA, UCSF School of Medicine; Evans Whitaker, MD, MLIS, UCSF Library; James Heilman, MD, University of British Columbia; Kingsley Otoide, inspi-com

Area(s) abstract covers: Medical Student Education (UME)

Domain(s) addressed:
Curricular Innovation
Global Health
Motivation
Quality Improvement

Category: Curriculum Evaluation/Educational Research

Abstract:
Purpose: Since Fall 2013 we have offered a month-long immersion elective rotation for fourth-year medical students to receive academic credit for editing Wikipedia. Background: By the end of 2015, Wikipedia's medical content had grown to 183,648 articles across 285 languages, and supported by 1.4 million references. At least 94% of medical students use Wikipedia as an information source, yet most schools do not train them to use this popular resource critically or contribute to its overall value. In our course, faculty and medical librarians partner with the WikiProject Medicine initiative, the Wiki Education Foundation, Translators Without Borders, and experienced Wikipedians. Methods: In fall 2016, we enrolled 22 students. We modified the course by 1) creating additional opportunities for remote synchronous video-conferencing work-in-progress sessions, 2) encouraging student teams of up to 4 students to collaborate on their Wikipedia-editing efforts, and 3) requiring weekly written reports of interim work. Results: Our students made 850 edits to 21 articles, adding 5 images and 35,200 words. The pages were viewed 201,000 times during the course. Discussion: Modifications to our course structure have not significantly altered medical student capacity to meaningfully contribute to Wikipedia. Students continue to appreciate the travel flexible nature of the course during their busy residency interview season. Reciprocal peer review remains an essential best practice in course activities. Reflective Critique: We will continue modifying our course structure based on student feedback. We are now encouraging other health professional schools to emulate and improve on our initiative. References: Azzam A, Bresler D, Leon A, Maggio L, Whitaker E, Heilman J, Orlowitz J, Swisher V, Rasberry L, Otoide K, Trotter F, Ross W, McCue JD. Why Medical Schools Should Embrace Wikipedia: Final-Year Medical Student Contributions to Wikipedia Articles for Academic Credit at One School. Acad Med. 2016; ePub ahead of print: doi: 10.1097/ACM.0000000000001381.
Abstract ID: 14

**Integrating the Foundational and Clinical Sciences through a Case-Based Grand Rounds**

Brian Block, MD, UCSF; Arielle Langer, MD, MPH, Icahn School of Medicine at Mount Sinai; Benjamin Gallagher, MD, Columbia University College of Physicians and Surgeons; Jeremy Richards, MD, The Medical University of South Carolina

**Area(s) abstract covers:** Medical Student Education (UME)

**Domain(s) addressed:**
- Basic Science Education
- Curricular Innovation
- Evaluation of Programs
- Clinical problem solving

**Category:** Curriculum Evaluation/Educational Research

**Abstract:**

Purpose / To assess student's perceptions of a conference that synthesizes pre-clinical and clinical studies. / /

Background / Integration of pre-clinical and clinical knowledge is highly desirable. To enhance this process at Columbia, we employed a published method (Richards, Schwartzstein, Irish, Almeida & Roberts, 2013) of case-based teaching in a mixed-learner setting. / /

Methods / Clinical Physiology Grand Rounds (CPGR) Columbia is a 75-minute evening session held monthly since 2014. During CPGR, a senior medical student presents a case to an audience of students from all years of medical school, while three moderators (chief residents or faculty) help the audience create a graphic representation of the case known as a concept map. / /

Results / With IRB approval, we surveyed CPGR attendees over a six-month period. Questions represented three domains; 1) clinical reasoning, 2) the mixed-learner environment, and 3) concept maps. / /

Results / During the study period, 100 unique students signed in at CPGR and 57 completed the survey; 24 (42%) pre-clinical and 33 (58%) clinical. / / 43% of all students felt the ‘approach to thinking about patients’ modeled in CPGR was unique, and 89% reported that CPGR helped them understand concepts they had previously memorized. 94% found it beneficial to observe how students from other years approach clinical problems. 83% agreed that concept maps help relate clinical presentations to underlying physiology, and 45% had made concept maps outside of CPGR. In a free-text item, some students suggested we print concept maps for audience members to take home and reference. / /

Discussion / CPGR leverages the diverse backgrounds of pre-clinical and clinical students to integrate across curricula; deepening student’s self-assessed understanding of physiology and clinical problems. Concept maps facilitate this process. / /

Reflective Critique / In response to feedback, we plan to hand out concept maps at future CPGR. / /

Abstract ID: 19

Using a Workbook to Enhance Learning in a MS2 Microbiology Course

Lindsey Ward, BA, UCSF School of Medicine; Peter Chin-Hong, MD, UCSF Department of Medicine; Brian Schwartz, MD, UCSF Department of Medicine

Area(s) abstract covers: Medical Student Education (UME)

Domain(s) addressed:
Basic Science Education
Curricular Innovation
Medical Humanities

Category: Curriculum Development

Abstract:
Background: Infection, Immunity, and Inflammation (I-3) is the microbiology course taken by second year medical students at UCSF. It is traditionally a difficult course that students struggle with due to its fast pace and heavy content load. / Purpose: Our goal was to create a resource that assists students to (1) more effectively contrast and compare key pathogens and syndromes from the course, (2) increase retention of material, (3) decrease stress associated with the course through therapeutic coloring exercises. / Methods: We conducted a literature review regarding using resources to supplement in-class learning, the difference between interacting with course material via screens or on paper, and the impact of coloring books on Adult Education. We held meetings with content experts and used the end of course E*Value survey from the 2014 class for suggestions on improving course resources. / Results/Evaluation Plan: The workbook was created to assist in learning for introductory topics, assist in learning for specific organisms, and contrast and compare different pathogens by clinical syndrome or organisms type. 51 students (33%) were sent a survey at random asking to rate the I-3 workbook / coloring book. Of the 51, 38 students (75%) responded to the survey, of which 19 students (46%) used the coloring book. Of the 19 students who reported using the coloring book, 3 (16%) strongly agreed, 4 (21%) agreed, 9 (47%) were neutral/undecided, 2 (11%) disagreed, and 1 (5%) strongly disagreed that the resource was helpful in consolidating material from the course. / Discussion: A student-created workbook to assist in class learning was utilized by over one-third of students surveyed and was felt to have moderate utility to enhance learning. Learners recommended enhanced integration between course material and to promote the material more readily during the course. / Reflective Critique: We will hold a focus group to get more qualitative feedback from the pilot class. Based on the feedback, we will create an updated version for the microbiology course for Bridges Curriculum.
Abstract ID: 53

**Understanding the role of third year clerkship students and the potential for change**

Catherine Burke, BA, UCSF School of Medicine; Dylan Masters, MD, UCSF School of Medicine, UCSF Department of Anesthesia; Patricia O’Sullivan, EdD, UCSF School of Medicine, UCSF Department of Medicine, UCSF Office of Medical Education; Leslie Sheu, MD, UCSF School of Medicine, UCSF Department of Medicine

**Area(s) abstract covers**: Medical Student Education (UME)

**Domain(s) addressed**:  
Curricular Innovation  
Faculty Development  
Health Systems  
Workplace Learning

**Category**: Curriculum Evaluation/Educational Research

**Abstract**:  
Purpose / We seek to understand the current role of the third year medical student (MS3), factors that determine this role, and the potential for change. /  
Background / Preclerkship medical education has undergone extensive reform and the clinical years are growing targets for curricular innovation. Clerkship leaders’ perspectives regarding the role of MS3s and potential for change will facilitate targeting and redefining these roles within novel curricula to better train 21st century physicians. /  
Methods / In this qualitative exploratory study, clerkship and site directors of the core clerkships participated in semi-structured interviews. Through an iterative consensus building process, researchers coded interview transcripts, identified themes, and constructed a model for MS3 roles and potential for change. /  
Results / Twenty-three (96%) directors were interviewed. The MS3 role is determined by student, supervisor and system factors. Three MS3 archetypes emerged: the apprentice (a mini-resident directly involved in patient care), the intellectual (a researcher who brings literature to the team), and the communicator (an interdisciplinary and patient liaison). The weight each archetype is given within a team or discipline determines the work that is considered authentic and valuable. Positive attitudes toward preclinical curricular changes were associated with openness to evolution of the MS3 role. /  
Discussion / The balance of the three MS3 archetypes varies based on the actors and environments involved, making it difficult to define the MS3 role, establish consistent expectations, or consider large-scale changes. While curricular reform presents an opportunity to re-evaluate the essential goals and expectations of clerkships as students build on new skills from preclerkship years, faculty development will be critical to embracing clerkship changes that maximize students’ workplace learning and ease their journey towards modern physicianship. /  
Reflective Critique / Feedback was provided in work-in-progress meetings through the HPE Pathway.
Developing a robust medical education curriculum in rural Nepal

Stephen Mehanni, M.D., UCSF; Lena Wong, M.D., UCSF; Bikash Gauchan, MBBS, MD-GP, Possible Health Nepal; Pawan Agrawal, MBBS, MD-GP, Possible Health Nepal; Dhiraj Jha, MBBS, Possible Health Nepal; Gajendra Duwal, MBBS, Possible Health Nepal; Gokul Kafle, MBBS, Possible Health Nepal; Uday Kshatriya, HA, Possible Health Nepal; Dan Schwarz, MD, MPH, Brigham and Women's Hospital - Division of Global Health Equity; Santosh Dhungana, MBBS, MD-GP, Possible Health Nepal

Area(s) abstract covers: ; ; CME; Curriculum is targeted towards junior doctors, and mid-level providers (health assistants and certified medical assistants) in rural Nepal

Domain(s) addressed:
Curricular Innovation
Evaluation of Programs
Global Health
Interprofessional Education

Category: Curriculum Development

Abstract:

Purpose: Use a novel approach to create a continuing medical education (CME) curriculum in rural Nepal which is acceptable to providers, relevant to their work, and incorporates active learning strategies. / Background: Bayalpata Hospital (BH) is a busy district hospital in Nepal managed through a public-private partnership by the NGO Possible. Senior physicians coordinate a daily CME session which is attended by physicians, mid-level providers and nurses. Didactics are delivered by staff physicians. There is no structured curriculum, and physicians are provided minimal guidance on delivering effective presentations. / Methods: Our needs assessment included a provider survey, analysis of the most common diagnoses at BH, and review of Nepali health statistics. A 6-month repeating curriculum was subsequently created using Kern’s curriculum development approach. Detailed and structured PowerPoint templates were developed to guide presenters to use educational objectives, cases, questions, visual learning aids, repetition, key learning points, and to target lectures to mid-level providers. Staff physicians create and deliver lectures based on these templates. / Evaluation Plan: Evaluation tools include pre- and post-curriculum exams, a satisfaction questionnaire, daily lecture evaluations, and periodic lecture audits focusing on active learning and effective use of PowerPoint. Results are stratified by level of training, which allows us to assess whether the curriculum is targeted to mid-level providers. Data are fed back to participants and used for continuous improvement. An additional metric of success is whether the curriculum can be implemented in other hospitals managed by Possible. / Dissemination: We will aim to share results of our curricular strategies in a peer-reviewed journal, and poster presentation at a major academic conference. / Reflective Critique: Formal and informal feedback is solicited from participants on an ongoing basis. Modifications based on feedback have included changes to course content, use of handouts, and increased frequency of exams.
Abstract ID: 21

**Fine Needle Aspiration Biopsy at a community hospital in rural Kenya**

Dianna Ng, MD, UCSF Medical Center; Morgan Ndaga, MBBS, Matibabu Foundation; Fred Okango, MBBS, Matibabu Foundation; Daniel Ogola, Matibabu Foundation; Britt-Marie Ljung, MD, UCSF Medical Center

Area(s) abstract covers: global medical education

Domain(s) addressed:
Clinical Instruction and Performance
Global Health
Patient Care

Category: Curriculum Development

Abstract:
Purpose: To teach healthcare providers how to perform fine needle aspiration biopsies (FNA) on palpable masses for cancer diagnosis. / Background: FNA is a cost-effective tool, which allows for rapid cancer diagnosis. Matibabu Foundation Hospital (MFH) is located in rural Kenya and offers services including outpatient and inpatient care, HIV diagnosis and treatment, and more recently, cancer screening services. Pathologists from UCSF were invited to teach FNA of palpable masses. A community-based training model previously piloted in Peru was adapted to the local setting. / Methods: / Patients were screened for palpable masses by MFH nurses during a cancer screening campaign, and referred for FNA if a palpable mass was identified. In October 2016, two UCSF cytopathologists visited MFH for a 5-day training program. Day 1 consisted of a hands-on workshop on FNA and smear preparation technique. On days 2-4, course participants performed FNAs on previously screened patients under close supervision. Cytopathologists provided immediate feedback to course participants. Patients were referred for appropriate treatment, as needed. / Results/Evaluation Plan: 5 healthcare providers participated in the training program, but only 1 was present for at least 4 of the 5 days and was the only trainee to reach competency. 698 patients (621 female, 77 male) were evaluated during the cancer screening campaign, and 110 were referred for FNA. A total of 88 patients underwent FNA; 36 of breast, 8 of thyroid, and 44 of various superficial sites. Only 2 cases were indeterminate; all other cases received definitive diagnoses. / Discussion/Dissemination: With dedicated training, healthcare workers can achieve competency in FNA technique and rapid assessment for adequacy. To ensure sustainability and expansion of FNAB, follow up training workshops will be necessary. / Reflective Critique: A summary of the pilot program was drafted by UCSF pathologists and reviewed by MF-K staff. Changes suggested include identifying committed participants and partnering with a local pathologist. /
Training in global health equity: An analysis of the introductory course of the Health Equity Action and Leadership (HEAL) Initiative curriculum

Nivedita Keshav, B.A., UCSF; Robin Goldman, M.D., UCSF; Robin Tittle, M.D., M.S., UCSF

Area(s) abstract covers: GME

Domain(s) addressed:
Competencies
Evaluation of Programs
Global Health
Interprofessional Education

Category: Curriculum Evaluation/Educational Research

Abstract:
Purpose: Evaluate the quality of training at the beginning of the 2016 – 18 interdisciplinary global health fellowship through analysis of participant feedback.

Background: The curriculum spans six competencies—Clinical Skills, Health Systems, Equity and Ethics, Leadership, Advocacy and Teaching—and is delivered through an intensive three-week course of didactic lectures, interactive case studies, and experiential simulations.

Methods:Fellows completed 1) pre-training surveys stating their goals for the curriculum, 2) individual session evaluations, and 3) post-curriculum surveys assessing their self-confidence in each of the six competencies. Responses to all surveys were analyzed quantitatively and qualitatively.

Results: Pre-training results show the most commonly expressed goals were to gain skills in clinical care, leadership, writing for advocacy, and teaching over the course of the fellowship. Highest rated sessions were described as “thought provoking”, broadening one’s “understanding of complexities”, and imparting “practical” and “applicable” skills. Post-training results show the majority of fellows felt more comfortable exercising skills across the six core competencies and felt training had met their expectations. Lastly, fellows appreciated learning with colleagues from various disciplines and settings, and wished to maintain these relationships.

Discussion: Our curriculum effectively improves confidence in our core competency areas. The majority of fellows endorse a shift in their understanding of global health delivery. Bringing together diverse perspectives from around the world augments the training experience. Next steps include reducing content overlap, developing a longitudinal curriculum, and maximizing relevance for diverse learners.

Reflective Critique: We need to develop tools to assess the impact of our curriculum on fellow performance in their various functions.
Abstract ID: 45

Structured Mentorship: A Key Component in the HEAL Initiative Global Health Fellowship

Adrian Aurrecoechea, BA, UCSF; Elizabeth Danial, UC Berkeley; Jane Lee, UC Berkeley; Phuoc Le, MD MPH, UCSF, UC Berkeley; Ethel Wu, MD, UCSF

Area(s) abstract covers: Multidisciplinary global health education

Domain(s) addressed: Curricular Innovation Global Health Longitudinal Educational Activities Mentoring

Category: Curriculum Evaluation/Educational Research

Abstract:
Purpose: The Health, Equity, Action & Leadership (HEAL) Initiative is a new UCSF fellowship offering multidisciplinary global health curriculum, mentorship, and experience providing care for the underserved domestically and internationally. Mentorship, an important aspect of professional education, is often difficult to obtain in the dynamic field of global health delivery. The HEAL mentorship model aims to provide structured mentorship in significant domains important to global health practitioners to facilitate program impact goals of promoting retention of providers at sites.

Methods: The mentorship approach relies on UCSF off-site advisors who mentor fellows via one-on-one and group calls and on non-UCSF site advisors who meet individually with fellows and oversee structured peer-to-peer mentorship meetings. Mentors are recruited upon recommendation by HEAL affiliates and undergo orientation before being paired with fellows. For planned yearly monitoring, HEAL fellows (n=14), off-site (n=4), and site advisors (n=6) participated in one-on-one semi-structured interviews.

Evaluation Plan: Program success will be defined quantitatively as universal support for program scaling. Qualitative analysis revealed challenge themes common across groups including mentorship expectation management, non-monetary compensation for unpaid mentors, and further mentor orientation needs. Strength themes common across groups included balance of structured and fellow-driven components, peer mentorship, and sense of community. Site and off-site mentors had overlapping roles in each of HEAL’s intended mentorship domains: skills translation, public health projects, clinical knowledge and continuing education, professional development, well-being, organizational and interpersonal relationships, networking, and career guidance.

Dissemination: Structure and outcomes of the mentorship model will be shared with global health educators through peer reviewed journals, presentations, and talks.

Reflective Critique: HEAL’s mentorship program coordinators will discuss feedback provided by trainees, mentors, and evaluation staff to develop changes to the mentorship model and for mentor recruitment.
Flipping the Script – A Controlled Trial of a Flipped-Classroom and Blended-Learning Module in Graduate Medical Education

Geoffrey Stetson, MD, UCSF, SFVAMC; Varun Saxena, MD, UCSF, Kaiser; Elizabeth Harleman, MD, UCSF, ZSFG

Area(s) abstract covers: GME

Domain(s) addressed:
Clinical Instruction and Performance
Computers and Technology
Curricular Innovation
Residency

Category: Curriculum Evaluation/Educational Research

Abstract:
Purpose: Facilitate access to curricular content, via a flipped classroom and blended learning module while maintaining or improving learning outcomes and satisfaction.

Background: The flipped classroom is an educational approach that uses out-of-class time for learners to absorb content, and in-class time to apply that new knowledge. Blended learning is a combination of online and in-person education. Currently, our residency program principally teaches via in-person lectures. Scheduling conflicts make it difficult for residents to attend all lectures.

Methods: The study group was PGY1s from the UCSF Internal Medicine Residency. The entire group was offered an online pre-test related to acute liver failure (ALF). The class was split into two groups. The control group received the current standard: a one-hour in-person lecture on ALF. The intervention group watched online videos using the same lecturer and content as the control group. In-class, these learners worked in teams on case-based activities. Both groups completed a post-test and a survey.

Results: Compared to the pre-test, both groups performed better on the post-test (P<0.05). There was no statistical difference in post-test results or satisfaction between the two groups. Learners enjoyed the ability to learn at different speeds via the videos, as well as reinforce the concepts with activities.

Discussion/Dissemination Plan: While no differences were measured between the two groups, benefits of the flipped classroom and blended learning should be noted. These alternative learning modalities offer flexible didactic opportunities. Additionally, learners felt the videos would serve as a useful resource for other learners. We will disseminate these results via formal publication, as well as submit the ALF module to MedEdPortal.

Reflective Critique: This abstract was reviewed in a faculty works-in-progress session. Noted limitations were a small sample size and high variance. Further studies will include multiple lectures, larger sample sizes, crossover groups, and alternative metrics.
RISE Method’s Impact on Resident Teaching

Jennifer Olenik, MD, UCSF; Marcia Glass, MD, UCSF; David Irby, PhD, UCSF; Larissa Thomas, MD, UCSF

Area(s) abstract covers: Medical Student Education (UME); GME

Domain(s) addressed:
Clinical Instruction and Performance
Residency

Category: Curriculum Evaluation/Educational Research

Abstract:
Purpose: Qualitatively evaluate how exposure to the RISE Method influences senior residents’ teaching practices. / Background: Few studies highlight specific structured teaching strategies for residents. We developed the RISE method (Reintroduce, Involve, Summarize, Elaborate) as a novel strategy to enhance resident teaching effectiveness and reinforce prior learning of the ward team, using principles of repetition, activation of prior knowledge, active engagement, and dual process learning (verbal/visual). We conducted a qualitative impact evaluation of the pilot study to disseminate RISE to senior residents. / Method: We created an interview guide to investigate residents’ self-identified teaching practices and influences to determine whether residents had incorporated teaching strategies emphasized by the RISE method. The lead author conducted semi-structured interviews with senior internal medicine residents who had been exposed to the RISE method through participation as an intern or in a workshop as a senior resident, or both. Using a grounded theory approach, three team members created codes and applied them to the interview transcripts. / Results: Five third-year and four second-year residents were interviewed. All of the third-year residents learned the method at a workshop. All of the second-year residents were exposed as interns and one also attended a workshop. Two residents described using the RISE method in place of prior teaching techniques and identified best practices for creating buy-in from team attendings. / Discussion: Preliminary themes suggest that RISE could be adapted to residents’ own teaching styles. We modified the code book and will conduct additional interviews. We will publish the method with the qualitative data about its impact on resident teaching and the various ways residents modified the method based on their personal teaching styles and practices. / Reflective Critique: After HPE and residency WIP meetings, we developed a qualitative evaluation strategy to support iterative data-gathering and identification of emergent themes.
Brief Structured Reflection by Course Directors Improves Student Rating of Core Didactic Courses in a Pharmacy Curriculum

Conan MacDougall, PharmD, MAS, UCSF; Tina Brock, MS, EdD, Monash University

Area(s) abstract covers: Pharmacy student education

Domain(s) addressed:
Faculty Development
Feedback
Quality Improvement
Reflection

Category: Curriculum Evaluation/Educational Research

Abstract:
Purpose: / Quality improvement based on feedback and reflection is a behavior that faculty are expected to model for their trainees. We hypothesized that completion of a brief, structured reflection activity by the course director (CD) soon after the conclusion of a didactic course could improve student evaluations of the course (SECs) in subsequent years. / / Background: / Students at the UCSF School of Pharmacy (SOP) are required to complete SECs addressing organization, instructor contact, and learning activities for all core didactic coursework. Starting in 2014-2015, the SOP curriculum committee required CDs to review their SECs and submit a form designed to guide their reflections and support course planning. / / Methods: / We compared SEC scores in SOP courses in 2014-2015 (pre-intervention) and 2015-2016 (post-intervention). We used ordinal logistic regression, clustered by course, to estimate the effect of the course reflection activity on SEC scores (a 1-5 Likert scale). We analyzed effects courses where the activity was implemented versus those where it was not via an interaction term. / / Results: / SEC scores increased in all three measured dimensions among courses where the structured reflection was implemented, with an odds ratio for increasing score of: 1.26 (95% CI 1.14-1.38) for organization, 1.24 (95% CI 1.13-1.37) for instructor contact, and 1.09 (95% CI 1.01-1.21) for learning activities. SEC scores decreased among courses not implementing the activity; the interaction between time period and implementation was statistically significant for all measures. / / Discussion: / Implementation of a brief, structured reflective activity for CDs significantly increased SEC scores the subsequent year. The finding of reduced SEC scores among courses not completing the requirement increases confidence in the validity of this effect. Schools should consider implementing such reflective activities for CDs. / / Reflective Critique: / This is the initial presentation of this data. Based on feedback obtained and further statistical analysis, results may be presented/published
Nutrition education and Dietary counseling in Internal Medicine Residency

Stutee Khandelwal, MD, MPH, UCSF Fresno; Sarah Zemore, PhD, UC Berkeley; Anke Hemmerling, MD, PhD, MPH, UC Berkeley

Area(s) abstract covers: GME

Domain(s) addressed:
Curricular Innovation
Primary Care
Residency

Category: Curriculum Development

Abstract:
Purpose: To conduct a needs assessment in outpatient nutrition education in Internal Medicine (IM) residency programs / Background: With increasing incidence of cardiovascular diseases (CVD), physicians need to provide dietary interventions for their patients. The current status of this practice may be influenced by the lack of a requirement for nutrition education in residency. / Methods: U.S. IM program directors (PDs) received a survey link (13 items) and additionally, they forwarded a resident version to their residents. The survey had items from previous surveys and suggestions from informal interviews of PDs and residents. Descriptive statistics and correlation coefficients were calculated. Multivariable linear regression was used to determine the relationship between residents’ report of number of instructional methods used for nutrition education in CV risk factors and the frequency of dietary counseling for patients. / Key Results: Forty PDs (10.4% response rate) and 133 residents across the U.S. responded. Sixty-one percent of residents reported having none or little training in nutrition and only 21% reporting counseling their patients often/always. Educators’ perception of low faculty expertise was negatively associated with provision of nutrition education (r=-0.33, p=0.04). After including nine confounding variables such as prior exposure to nutrition education, the number of instructional methods increased the variance explained in amount of dietary counseling from 3% to 16%. / Discussion/Application: This study showed that while nutrition education is minimal in internal medicine residency, if provided using a variety of strategies, can increase residents’ dietary counseling for patients. This result substantiates the need and justification for increasing nutrition education in residency. Low response rate limits the study’s interpretation; however responses were received from all parts of the US. / Reflective Critique: Received feedback on abstract from ESCape /